

# VM9223

Operation Manual

Manual de Operación

Instructions d'opération



**160** Watts Peak  
Vatios el Máximo  
Watts Maximum  
40W x 4

## CONTENTS

Thank you for choosing a Jensen product. We hope you will find the instructions in this owner's manual clear and easy to follow. If you take a few minutes to look through it, you'll learn how to use all the features of your new Jensen VM9223 Mobile Multimedia Receiver for maximum enjoyment.

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## CONTENIDO

Gracias por elegir los productos Jensen. Esperamos que encuentre en este manual instrucciones claras y fáciles de seguir. Si se toma unos pocos minutos para leerlo, aprenderá cómo utilizar todas las funciones de su nuevo radio Jensen VM9223 para su máximo entretenimiento.

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## TABLE DES MATIÈRES

Merci d'avoir choisi un produit Jensen. Nous espérons que vous allez trouver les instructions dans ce guide de propriétaire claires et faciles à suivre. Prenez quelques minutes à le consulter, vous apprendrez à utiliser toutes les fonctions de votre nouvelle radio Jensen VM9223 pour en tirer une jouissance maximum.

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## INTRODUCTION

Congratulations on your purchase of the Jensen VM9223 Mobile Multimedia Receiver.

It's a good idea to read all of the instructions before beginning the installation. We recommend having your Jensen VM9223 installed by a reputable installation shop.

### Features

#### DVD

- Aspect Ratio - Full and Normal
- Fast Forward - 2X, 4X, 8X and 20X
- Slow Motion - 1/2, 1/4, 1/6 and 1/7
- Play, Pause, Stop, Next Chapter and Previous Chapter

#### CD / MP3 / WMA

- ID3 Tag Compatible
- Directory Search (MP3 / WMA Only)
- Direct Track Access via Remote Control
- Burn up to 1500 MP3 and WMA Files onto a DVD+R / RW
- Audible Forward / Reverse Track Search (CD-DA Only)
- Random, Repeat and Intro
- Play, Pause, Stop, Next Track and Previous Track

#### Tuner

- USA, A. America 1, Arabia, China, S. America 2, Europe, Korea Frequency Spacing
- 30 Station Presets (18 FM / 12 AM)
- Auto Stereo / Mono
- Auto Store

#### Chassis

- Motorized Slide-Down LCD Screen
- 2.0 DIN (Import / ISO-DIN Mountable)
- 7" TFT Active Matrix LCD with Anti-Glare Coating
- 336,960 Sub Pixels (1440W X 234H)
- Pixel Pitch – 0.321W X 0.370H
- Screen Tilt / Angle Adjustment
- Beep Tone Confirmation (On-OFF Option)
- Heat Management System – Forced Air Cooling to keep the chip sets operating at nominal temperatures

#### General

- Navigation Ready (NAV102 Only)
- Bluetooth Ready (with purchase of BTM10) providing hands-free profile for safety / convenience and A2DP profile for streaming music from a PDA / PMP
- 44-Key Infrared Remote Control
- Composite Video Output for an Additional Screen
- Two Audio / Video Auxiliary Inputs for Game Console, Camcorder, Navigation, etc.

- Three-Band Tone control (Bass, Mid and Treble) with Eight Preset EQ Curves
- Front, Rear and Subwoofer Line Output
- Programmable Volume Control
- Rear Camera Input (Normal and Mirror Image View)
- Touch Screen Calibration Mode
- 100-Ohm Preamp Line Output – All Audio Channels
- 2VRMS Line Output – All Channels
- RCA Audio/Video Input
- 2.5mm Front Panel Audio/Video Input
- SWC Interface – Compatible with PAC adapter SWI-PS Steering Wheel Control Interface, sold separately

### Optional Equipment

#### NAV102

The VM9223 is "navigation ready." Before accessing any navigation features, you must purchase and install the navigation module (NAV102). All installation and operating instructions will be included with the navigation module.

Once the navigation module is connected and operating properly, the NAV source mode will become active. While the navigation module is not installed, the NAV option appears gray, indicating the function is not available.

#### BTM10

Before you can connect to a Bluetooth enabled device, you must purchase and install the Jensen BTM10.

#### Bluetooth Phone

See "Bluetooth Operation" on page 16.

#### Rear Camera

The VM9223 is "camera ready." Before accessing any camera features, you must purchase and install a rear video camera. Once the rear camera is connected and operating properly, the CAMERA source mode will become active. While the camera is not installed, the CAMERA option appears gray, indicating the function is not available.

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**WARNING! To prevent injury from shock or fire, never expose this unit to moisture or water.**

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**WARNING! Never use irregular discs.**

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**WARNING! Using an improper fuse may cause damage to the unit and result in a fire.**

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**WARNING! To reduce the risk of a traffic accident (except when using for rear view video camera or navigation) never use the video display function while driving the vehicle. This is a violation of federal law.**

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**WARNING! Never disassemble or adjust the unit.**

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## CONTROLS AND INDICATORS

### Button Operation

#### 1. MUTE

Press to silence the audio. Press again to resume the previous volume level.

In radio mode, *press and hold* to set the LOC/DX function. In all other modes, *press and hold* while the volume icon is showing to set the turn-on volume.

#### 2. SD Card Slot

Insert SD card for playback of compatible multimedia files.

#### 3. PIC

Press to adjust the Brightness and Contrast. Press the **PIC** button again to move between Brightness and Contrast. Press the **VOL-/VOL+** buttons (5) to adjust the setting for the selected option.

When the NAV102 is connected to the VM9223, *press and hold* to display the navigation user interface.

#### 4. OPEN/CLOSE

Press to activate the automatic mechanical system and slide the TFT monitor down to reveal the disc and SD slots. Press again to close the TFT.

*Press and hold* to activate the tilt function. Use the **VOL -/VOL+** buttons to adjust the angle of the screen while the yellow tilt icon is flashing. You can also adjust the title using the  $\wedge$  and  $\vee$  buttons (27, 26) on the remote control. Press once to adjust the downward tilt angle of the screen one step at a time or *press and hold* to adjust the angle in a continuous motion.

#### 5. VOL -/VOL+

Press **VOL -** to decrease the volume. Press **VOL+** to increase the volume.

#### 6. SRC/⏻

Press to turn the unit on. *Press and hold* to turn the unit off. Press to access the SOURCE MENU.

#### 7. TFT Monitor

#### 8. IR Remote Control Receiver

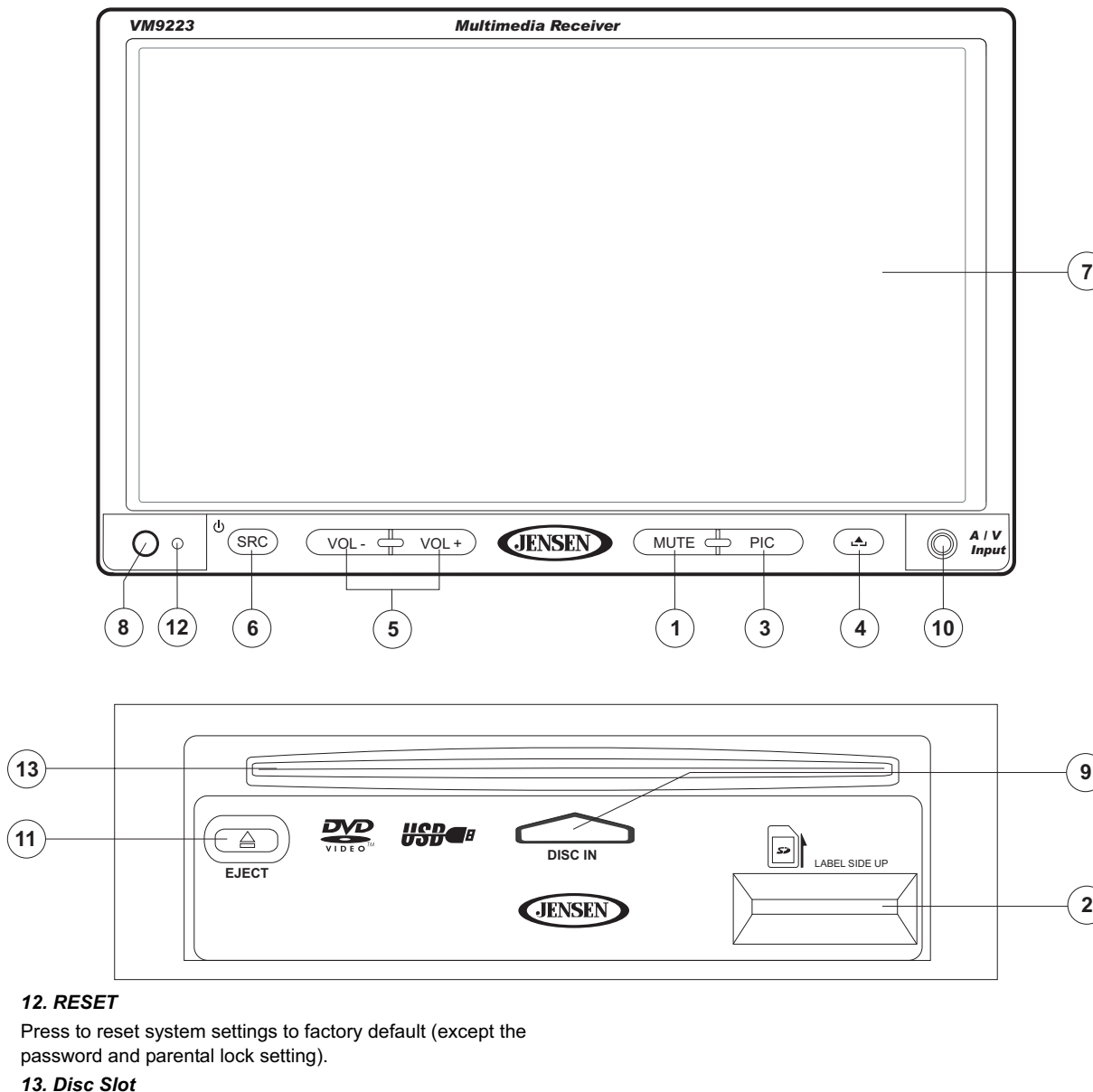
#### 9. Disc Indicator Light

#### 10. Audio/Video Input

#### 11. Eject

Press to eject disc.

*Press and hold* to reset core mechanism position.



#### 12. RESET

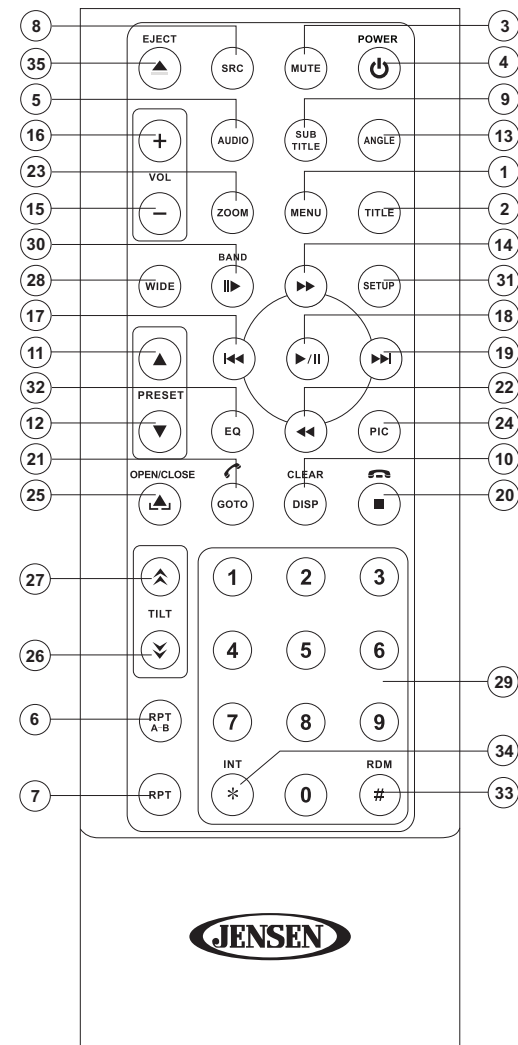
Press to reset system settings to factory default (except the password and parental lock setting).

#### 13. Disc Slot

# REMOTE CONTROL

**Table 1: Remote Control Functions**

| Button     |      | Function  |   |  |  |
|------------|------|---|---|--|--|
| Name       | Ref# | DVD   | VCD   | TUNER  | CD/MP3/USB/SD                          |
| MENU       | 1    | Enter the main menu of the disc   | Turn on/off PBC when playing VCD  |  |  |
| TITLE      | 2    | Enter the title menu of the disc  |   |  |  |
| MUTE       | 3    | Toggle on/off audio output  | Toggle on/off audio output  | Toggle on/off audio output                                       | Toggle on/off audio output             |
| POWER/⏻    | 4    | Turn the power on/off   | Turn the power on/off   | Turn the power on/off  | Turn the power on/off                  |
| AUDIO      | 5    | Change the audio language for disc playback   |   |  |  |
| REPT A-B   | 6    | Setup to repeat playback from time frame A to time frame B  | Setup to repeat playback from time frame A to time frame B  |  |  |
| REPT       | 7    | Repeat playback of current chapter  | Repeat playback of current chapter  |  | Repeat playback of current track       |
| SRC        | 8    | Select playing mode   | Select playing mode   | Select playing mode  | Select playing mode                    |
| SUBTITLE   | 9    | Language selection for subtitle   |   |  |  |
| DISP/CLEAR | 10   | Display playback information<br>Delete entry or move backwards to correct error in Direct Access mode | Display playback information<br>Delete entry or move backwards to correct error in Direct Access mode |  |  |
| PRESET ^   | 11   |   |   | Navigate the preset station list                                 |  |
| PRESET V   | 12   |   |   | Navigate the preset station list                                 |  |
| ANGLE      | 13   | Play back disc in different angle for a scene   | Play back Picture CD with different angle of picture displayed  |  |  |
| >>         | 14   | Fast forward the disc content   | Fast forward the disc content   | Changes station up one increment                                 | Fast forward the disc content          |
| VOL -      | 15   | Decrease volume   | Decrease volume   | Decrease volume  | Decrease volume                        |
| VOL +      | 16   | Increase volume   | Increase volume   | Increase volume  | Increase volume                        |
| <<         | 17   | Select the previous chapter for playback  | Select the previous chapter for playback  | Search an available radio station by decreasing tuning frequency | Select the previous track for playback |
| >          | 18   | Pause playback/start playback   | Pause playback/start playback   |  | Pause playback/start playback          |
| >>         | 19   | Select the next chapter for playback  | Select the next chapter for playback  | Search an available radio station by increasing tuning frequency | Select the next track for playback     |
| ■/☎        | 20   | Stop playback/end call  | Stop playback/end call  | End call   | Stop playback/end call                 |
| GOTO/☎     | 21   | Go to specific time frame and playback/dial call  | Go to specific time frame and playback/dial call  | Enter radio station directly                                     | Dial call when Bluetooth connected     |



**Table 1: Remote Control Functions**

| Button  |      | Function                            |                                      |                                     |  |
|---|------|-------------------------------------|--------------------------------------|-------------------------------------|--|
| Name  | Ref# | DVD                                 | VCD                                  | TUNER                               | CD/MP3/USB/SD                            |
| <<  | 22   | Slow playback/fast rewind playback  | Slow playback/fast rewind playback   | Changes station down one increment  |  |
| ZOOM  | 23   | Zoom in/out on an image             | Zoom in/out on an image              |                                     |  |
| PIC   | 24   | Display set-up parameters           | Display set-up parameters            |                                     |  |
| OPEN/<br>CLOSE                                      | 25   | Open/close the TFT monitor          | Open/close the TFT monitor           | Open/close the TFT monitor          | Open/close the TFT monitor               |
| ⏴   | 26   | Decrease monitor tilt angle         | Decrease monitor tilt angle          | Decrease monitor tilt angle         | Decrease monitor tilt angle              |
| ⏵   | 27   | Increase monitor tilt angle         | Increase monitor tilt angle          | Increase monitor tilt angle         | Increase monitor tilt angle              |
| WIDE  | 28   | Select display mode: FULL or NORMAL | Selects display mode: FULL or NORMAL |                                     |  |
| 1, 2, 3, 4, 5,<br>6, 7, 8, 9, 0<br>(Numeric Keypad) | 29   | Directly access chapter             |                                      | 1-6 selects preset for current band | Directly access track                    |
| ▶/BAND  | 30   | Slow motion playback                | Slow motion playback                 | Change AM/FM band                   |  |
| SETUP   | 31   | Display Setup menu                  | Display Setup menu                   | Display Setup menu                  | Display Setup menu                       |
| EQ  | 32   | Modify equalizer settings           | Modify equalizer settings            | Modify equalizer settings           | Modify equalizer settings                |
| RDM   | 33   | Play all chapters in random order   |                                      |                                     | Play all tracks in random order          |
| INT   | 34   |                                     |                                      |                                     | Play the first ten seconds of each track |
| EJECT   | 35   | Eject disc                          | Eject disc                           | Eject disc                          | Eject disc                               |

## USING THE TFT MONITOR

### Open/Close TFT Monitor

#### Open TFT Monitor

Press the **OPEN** (▲) button (4) on the front panel or remote control to slide the monitor panel down to reveal the disc and SD card slots.

#### Close TFT Monitor

Press the **OPEN** (▲) button (4) on the front panel or remote control to close the monitor panel.

### Monitor Tilt Angle Adjustment

A known characteristic of LCD panels is the quality of the display in relationship to the viewing angle. The monitor angle can be adjusted for optimum viewing using one of the following methods:

#### Step by Step Angle Adjustment

Press the (▲) or (▼) button on the remote control (27, 26) to adjust the tilt angle of the screen one step at a time.

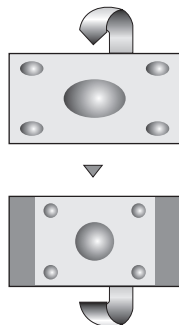
You can also adjust the tilt by *pressing and holding* the **OPEN** (▲) button (4) on the front panel. Use the **VOL -/VOL+** buttons to adjust the angle of the screen while the red tilt icon is flashing.

#### Continuous Angle Adjustment

*Press and hold* the (▲) or (▼) button on the remote control to adjust the tilt angle in a continuous motion.

### Aspect Ratio

Press the **WIDE** button (28) on the remote control to adjust the aspect ratio as follows:



#### FULL

The entire screen is extended horizontally to the aspect ratio of 16 to 9. The extension ratio is the same at any point.

#### NORMAL

The conventional display image has a 4 to 3 ratio of horizontal to vertical, leaving a blank area on the right and left sides of the display.

#### STANDBY

Screen becomes black. Touch screen to resume.

### Image Setting

Table 2 shows the video output mode for each playing source.

Table 2: Video Output Modes

| Playing Source | Video Output Modes |
|----------------|--------------------|
| AM/FM TUNER    | RGB Mode           |
| DVD            | RGB Mode           |
| BT             | RGB Mode           |
| AUX IN1        | CVBS Mode          |
| AUX IN2        | CVBS Mode          |
| NAV            | CVBS Mode          |
| CAMERA         | CVBS Mode          |

\*CVBS – Composite Video Baseband Signal

#### Parameter Adjustment Procedure

- Enter Picture Quality Setting Mode:**  
Press the **PIC** button (24) on the remote control or the **PIC** button (3) on the monitor.
- Select Item to Set:**  
Press the **PIC** button (3) on the control panel to select "BRIGHT" or "CONTRAST".
- Set Parameters:**  
Press the +/- buttons (15, 16) on the remote or press the **VOL-/VOL+** buttons (5) on the control panel.
- Exit Picture Quality Setting Mode:**  
Press the **PIC** button (24) on the remote control or the **PIC** button (3) on the monitor

### Parking Brake Inhibit

When the pink "Parking" wire is connected to the vehicle Parking Brake circuit, the front TFT monitor will display video when the Parking Brake is engaged. (When the pink wire is grounded via the Parking Brake circuit, video will be displayed.)

## OPERATING INSTRUCTIONS

### Power On / Off

Press the **SRC** button (6) on the unit (or the **SRC** button (4) on the remote control) to turn the unit on. The buttons on the front of the unit light up and the current mode status appears in the LCD (7).

Press and hold the **SRC** button to power off the unit.

### Audible Beep Confirmation

An audible beep tone confirms each function selection. The Beep tone can be disabled through the Setup menu.

### Mute

Press the **MUTE** button on the front panel (1) or the **MUTE** button (3) on the remote control to mute the volume from the unit. Press the **MUTE** button again to restore the volume. The yellow volume icon appears on the TFT with an "X" through it. Adjusting the volume or using any of the audio setup features cancels the mute function.

### Playing Source Selection

Press the **SRC** button (6) on the front panel or the **SRC** button (8) on the remote to change between available playing sources. The playing mode is displayed on the TFT screen.

External peripheral devices can be connected to this unit via the rear RCA inputs or the **A/V INPUT** connector (10) on the front of the unit. Select "AUX-IN1" to access an auxiliary device connected to the **A/V INPUT** on the front panel. Select "AUX IN2" mode to access a device connected to the rear AUX IN connectors.

Connect the external device to the 2.5mm to 3.5mm Media Cable and then plug the cable into the **A/V INPUT** connector (10) on the front of the radio. Select "AUX IN1" mode to access an auxiliary device connected to the **A/V INPUT** on the front of the radio. You cannot directly control external devices connected to the **A/V INPUT**.

### Volume Adjustment

To increase or decrease the volume level, press the **VOL+ / VOL-** buttons (15, 16) on remote control or front panel (5). The volume ranges from "0" to "40". The LCD or TFT screen displays the volume level for 3 seconds.

### Steering Wheel Control (SWC)

The VM9223 is compatible with the PAC (Pacific Accessory Corporation) steering wheel control adapter SWI-PS. A 3.5mm female connector (labeled "SWC Interface") on the

back of the head unit allows connectivity to the PAC adapter. Please refer to the instructions included with the PAC adapter for detailed installation information.

### SWC Functions

The following controls are available for most vehicles:

1. Vol Down
2. Vol Up
3. Mute
4. Seek Down / Previous Track / \*\* Preset Down
5. Seek Up / Next Track / \*\* Preset Up
6. SRC (Source)
7. \*\* Select
8. \*\* Select
9. Band

\*\* If additional steering wheel control buttons are available on the vehicle, function 7 / 8 may be assigned the "Select" feature. This feature / function may not be available on some vehicles.

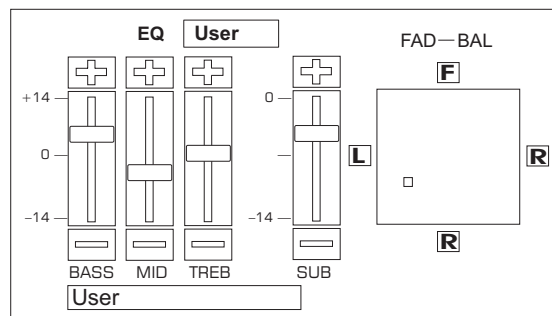
### Select Operation

If "Select" (function 7 or 8) is held down and function 4 is pressed momentarily, Preset Up will be selected. If "Select" (function 7 or 8) is held down and function 5 is pressed momentarily, Preset Down will be selected.

### Audio Control Menu

The Audio Control feature allows you to easily adjust your audio system to meet the acoustical characteristics of your vehicle, which vary depending on the type of vehicle and its measurements. Proper setting of the Fader and Balance boosts the effects of the cabin equalizer.

Press the **EQ** button on the touch screen to display the audio menu.



To adjust an audio feature:

1. Use the touch screen, or press the (**>>|**) / (**|<<**) buttons (14, 22) on the remote control to highlight the audio feature to be adjusted.
2. Touch the screen to select the highlighted option.
3. Touch the **+/-** buttons on the screen or press the **|<<**, **>>|**, **>>**, or **<<** buttons (17, 19, 14, 22) on the remote control to adjust the selected feature to the desired setting.

Table 3: Audio Adjustments

| Audio Function | Adjustable Range |
|----------------|------------------|
| EQ             | User             |
|                | Rock             |
|                | Hip Hop          |
|                | Dance            |
|                | Latin            |
|                | Rave             |
|                | Urban            |
|                | Acoustic         |
| BASS           | -14 to +14       |
| MID            | -14 to +14       |
| TREB           | -14 to +14       |
| SUB            | -14 to 0         |
| BAL-FAD        | Grid             |

**NOTE: The EQ mode will automatically change to "USER" when individual audio functions are adjusted.**

The Audio menu will automatically exit after a few seconds of inactivity. To exit quickly, touch the top left corner of the screen.

### System Reset

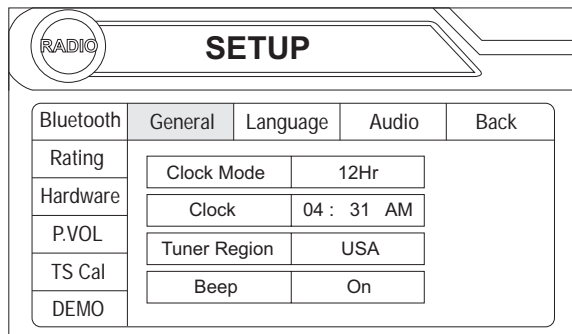
To correct a system halt or other illegal operation, use the tip of a pen to press the reset button (12) located on the front bottom-left corner of the unit. After a system reset, the unit restores all factory default settings.

**NOTE: If the unit is reset while a DVD is playing, the DVD resumes play once the reset is complete.**



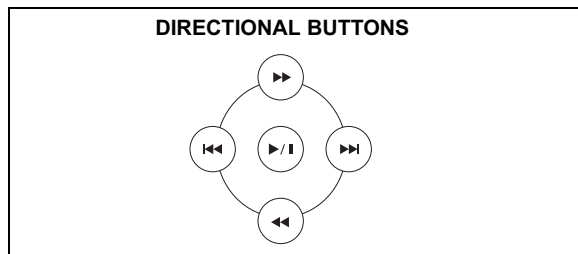
## SETUP MENU

To access system settings, press the **SETUP** button (31) on the remote control or touch the button on the screen to enter the "SETUP" menu. The "GENERAL" sub-menu appears highlighted in blue.



### Accessing Menu Items

Touch the sub-menu name, press the <<, >>, |<<, or >>| directional buttons (22, 14, 17, 19) on the remote control to select a sub-menu (Language, Audio, Rating, etc.).



The features available for adjustment under the highlighted sub-menu option will appear in the center of the screen.

### Adjusting a Feature

1. Use the touch screen to select the feature to be adjusted.
2. Enter the option field for the feature you want to adjust by using the touch screen or pressing the >|| button (18) on the remote. A submenu appears in a second row with the selected option highlighted in blue.

3. Select a new value by using the touch screen or pressing the >> or << buttons (14, 22) on the remote control.
4. Use the touch screen or press the >|| button (18) on the remote control to confirm setup.

#### General Sub-menu Features

| Setting      | Options  | Function  |
|--------------|----------|---|
| Clock Mode   | 12Hr     | Clock displays 12 hour time using AM and PM.  |
|              | 24Hr     | Clock displays 24 hour time up to 23:59.  |
| Clock        | (HH:MM)  | Clock appears in the top right corner of the screen and on the LCD screen during certain operations. NOTE: The AM/PM indication will change as you continue to adjust the hour past 12.                                 |
| Tuner Region | USA      | <ul style="list-style-type: none"> <li>• AM Frequency Spacing - 10kHz</li> <li>• AM Frequency Band - 530kHz~1720kHz</li> <li>• FM Frequency Spacing - 200kHz</li> <li>• FM Frequency Band - 87.5MHz~107.9MHz</li> </ul> |
|              | S.Amer1  | <ul style="list-style-type: none"> <li>• AM Frequency Spacing - 10kHz</li> <li>• AM Frequency Band - 530kHz~1720kHz</li> <li>• FM Frequency Spacing - 100kHz</li> <li>• FM Frequency Band - 87.5MHz~108.0MHz</li> </ul> |
|              | Arabia   | <ul style="list-style-type: none"> <li>• AM Frequency Spacing - 9kHz</li> <li>• AM Frequency Band - 531kHz~1620kHz</li> <li>• FM Frequency Spacing - 100kHz</li> <li>• FM Frequency Band - 87.5MHz~108.0MHz</li> </ul>  |
|              | China    | <ul style="list-style-type: none"> <li>• AM Frequency Spacing - 9kHz</li> <li>• AM Frequency Band - 522kHz~1620kHz</li> <li>• FM Frequency Spacing - 100kHz</li> <li>• FM Frequency Band - 87.5MHz~108.0MHz</li> </ul>  |
|              | S. Amer2 | <ul style="list-style-type: none"> <li>• AM Frequency Spacing - 5kHz</li> <li>• AM Frequency Band - 520kHz~1600kHz</li> <li>• FM Frequency Spacing - 100kHz</li> <li>• FM Frequency Band - 87.5MHz~108.0MHz</li> </ul>  |

| Setting | Options | Function   |
|---------|---------|--|
|         | Europe  | <ul style="list-style-type: none"> <li>• AM Frequency Spacing - 9kHz</li> <li>• AM Frequency Band - 522kHz~1620kHz</li> <li>• FM Frequency Spacing - 50kHz</li> <li>• FM Frequency Band - 87.5MHz~108.0MHz</li> </ul>  |
|         | Korea   | <ul style="list-style-type: none"> <li>• AM Frequency Spacing - 9kHz</li> <li>• AM Frequency Band - 531kHz~1602kHz</li> <li>• FM Frequency Spacing - 200kHz</li> <li>• FM Frequency Band - 88.1MHz~107.9MHz</li> </ul> |
| Beep    | On      | When turned on, an audible beep tone confirms each function selection.   |
|         | Off     | No beep sounds.  |

#### Language Sub-menu Features

If a DVD supports more than 1 Subtitle or Audio language, all the languages are available for selection during playback. If the selected language is not supported by the DVD, then the default language is used.

| Setting      | Options | Function   |
|--------------|---------|--|
| OSD          | English | On Screen Display appears in English.  |
| DVD Audio    | English | DVD Audio is heard in English when the option is available.                            |
| DVD Subtitle | English | DVD subtitles automatically appear in English when available.                          |
|              | Auto    | DVD subtitles appear according to the default subtitle language specified on the disc. |
|              | Off     | DVD subtitles do not appear automatically.   |
| Disc Menu    | English | DVD menu (if applicable) is displayed in English.                                      |

#### Audio Sub-menu Features

| Setting   | Options | Function  |
|-----------|---------|---|
| DRC       | Off     | Employ the Dynamic Range Control for better playback for low volumes. |
|           | On      |   |
| Loudness  | Off     | Turn the Bass Boost feature on/off.                                   |
|           | On      |   |
| Subwoofer | Off     | Turn the subwoofer on/off.  |
|           | On      |   |

| Setting    | Options | Function   |
|------------|---------|--|
| Sub Filter | 80Hz    | Selecting a crossover frequency sets a cut-off frequency of the subwoofer's LPF (low-pass filter). The Crossover frequency setting has no effect if the subwoofer is set to "OFF". |
|            | 120Hz   |  |
|            | 160Hz   |  |

#### Bluetooth Sub-menu Features

| Setting      | Options | Function   |
|--------------|---------|--|
| Bluetooth    | On      | Enable Bluetooth function.   |
|              | Off     | Disable Bluetooth function.  |
| Auto Answer  | On      | The unit automatically answers all incoming calls.   |
|              | Off     | Manually answer calls by touching the "call" button.   |
| Connect      | Manual  | Connect the last active mobile phone by touching the CONNECT icon when disconnected.   |
|              | Auto    | Automatically connect when your paired phone is in range.  |
| Pairing Code |         | The default code is "1234". Touch the keypad icon to open the keypad and enter the pairing code or pass key required for Bluetooth connection to your mobile phone. Not all phones/devices require a pairing code. The default code is "0000" for many models. |

#### Rating Sub-menu Features

The DVD system has a built-in parental lock feature to prevent unauthorized persons from viewing restricted disc content. By default, the rating system is unlocked. Once setup, the parental lock is released only by entering the correct password. Once the password is entered, rating is available for setup.

| Setting  | Options | Function   |
|----------|---------|--|
| Password | ----    | Enter a 4-digit password to activate the "Rating" feature. |

| Setting      | Options     | Function  |
|--------------|-------------|---|
| Rating       | 1. Kid Safe | Select the appropriate rating level for the intended audience.<br><br>You may override higher ratings by using your password. |
|              | 2. G        |   |
|              | 3. PG       |   |
|              | 4. PG-13    |   |
|              | 5. PG-R     |   |
|              | 6. R        |   |
|              | 7. NC-17    |   |
|              | 8. Adult    |   |
| Load Factory | Reset       | Select "Reset" to restore the factory default settings for all functions except the Rating system.                            |

To reset the password, access the "RATING" menu and enter the current password. Once the correct password is entered, you can access the "Password" field and enter a new one.

**NOTE: Record the password and keep it in a safe place for future reference. The rating for each disc is marked on the disc, disc packing, or documentation. If the rating is not available on the disc, the parental lock feature is unavailable. Some discs restrict only portions of the disc and the appropriate content will play. For details, please refer to the disc description.**

#### Hardware Sub-menu Features

| Setting  | Options | Function   |
|--|---------|--|
| Camera In  | Normal  |  |
|  | Mirror  | Reverse the camera image as if looking through a rear-view mirror.                                       |
| TFT Auto Open  | On      | The TFT panel automatically opens when the unit is turned on.  |
|  | Off     | You must press the OPEN button (1) to open the TFT panel.  |
|  | Manual  | When the ignition is turned OFF, the TFT panel DOES NOT retract if it was previously out                 |
| Video Input (Input circuitry autodefects the video signal from the Aux In source). | NTSC    | The color signals are output in the standard NTSC format.  |
|  | PAL     | The color signals are output in the standard PAL format.   |
|  | Auto    | The color signal output is switched automatically based on the current video input signal - NTSC or PAL. |

If the monitor is in display mode, the monitor automatically switches to CAMERA mode upon reverse driving. When the

reverse driving stops, the monitor return to its original input mode.

#### P.VOL Sub-menu Features

| Setting | Options | Function  |
|---------|---------|---|
| Source  | Radio   | Choose a source for which you would like to increase the relative volume (LEVEL). |
|         | Disc    |   |
|         | USB     |   |
|         | AUX IN1 |   |
|         | AUX IN2 |   |
|         | NAVI    |   |
|         | BT      |   |
| Level   | 0-6     | Increase relative volume for specified source up to 6 decibels.                   |

#### TS Cal (Screen Calibration)

To access the "Screen Calibration" function from the SETUP menu, select the "TS CAL" option.

After entering calibration mode, a crosshair + appears in a corner quadrant of the screen. To begin calibration, *press and hold* the crosshair for one second until it moves to the next quadrant. Continue for each quadrant until the calibration is completed.

#### DEMO Sub-Menu Features

You can stop/run demonstration mode or turn Demo Auto Run on/off by choosing the "Demo" option from the SETUP MENU.

When "Demo Auto Run" is Off, you can select "Demo Mode > Run" to start Demo Mode. Demo Mode scrolls through the various source screens, simulating activity on the display.

"Demo Mode" is discreetly displayed in yellow text (below the clock), to indicate the unit is in Demo Mode. To stop Demo Mode, press the upper-left quadrant of the TFT (Source select).

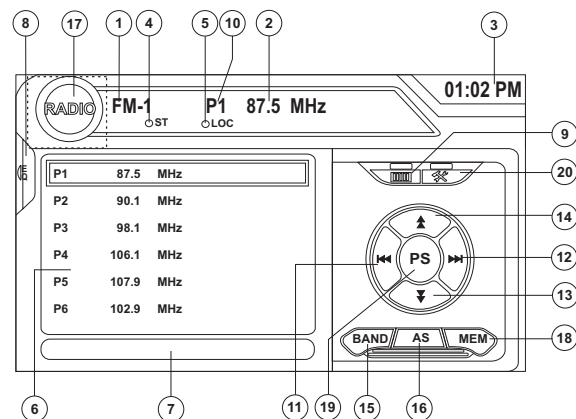
When "Demo Auto Run" is On, the unit will automatically display Demo Mode when powered on.

#### Exiting the System Setup Menu

To exit setup mode and resume normal playback, press the **SETUP** button (31) on the remote control or touch the **BACK** button on the screen.

## TUNER OPERATION

### Tuner TFT Display



1. Current radio band indicator
2. Radio frequency indicator
3. Clock
4. Stereo reception indicator
5. Tuning mode indicator (local/distant)
6. Preset radio stations: Touch to recall preset stations
7. No information in Tuner mode
8. Touch for quick access to Equalizer level settings
9. Touch to access the direct entry screen
10. Preset station indicator
11. |<<: Touch to seek backward
12. >>|: Touch to seek forward
13. <<: Touch to tune backward one step
14. >>: Touch to tune forward one step
15. **BAND**: Touch to change between AM/FM bands
16. **AS**: Touch to automatically store stations
17. Touch to view the SOURCE MENU and select a new playback source
18. **MEM**: View screen used to enter current channel into preset memory
19. **PS** (Preview Scan): Touch to scan all stations available, stopping for 5 seconds at each and continuing until a station is selected
20. View setup menu.

### Switch to Radio Tuner source

- Touch the top left corner of the screen (the RADIO circle) to view the SOURCE MENU. Touch "Radio".
- Press the **SRC** button (6) on the front panel or remote control (8) to switch to the AM/FM source.

### Select FM/AM Band

Touch the **BAND** button (15) on the screen or remote control (30) to change between the following bands: FM1, FM2, FM3, AM1, and AM2.

### Seek Tuning

To seek the next station:

- Touch the >>| button on screen (12).
- Press the >>| button (19) on remote control.

To seek the previous station:


- Touch the |<< button on screen (11).
- Press the |<< button (17) on the remote control.

### Manual Tuning

To increase or decrease the tuning frequency one step:

- Touch the ▲ or ▼ buttons on screen (14, 13).
- Press the >> or << buttons (14, 22) on the remote control.

### Direct Tuning

To enter a radio station directly, touch the  button (9) or press the **GOTO** button (21) on the remote control to display the direct entry menu.



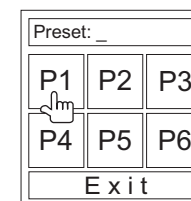
Enter the desired radio station using the on-screen number pad. Press the enter button (arrow) to tune to the selected station. To exit the screen without changing the station, touch **Exit**. To clear your entry and start over, touch **Clear**.

### Using Preset Stations

Six numbered preset buttons store and recall stations for each band. All six stored stations (P1-P6) for the current band appear on the screen.

#### Storing a Station

1. Select a band (if needed), then select a station.
2. Touch the on-screen **MEM** button (18) to open the preset screen.



3. Touch the preset number in which you would like to store the current station (or touch **Exit** to cancel and close the menu). The preset number and station appears highlighted.


#### AS (Auto Store)

Touch the on-screen **AS** button (16) to automatically store six strong stations as presets for the band currently in use.

## DVD/VCD VIDEO OPERATION

**NOTE:** When properly installed, DVD video cannot be displayed on the main TFT screen unless the parking brake is applied. If you attempt to play a DVD while the vehicle is moving, the TFT screen displays the following: "Warning !!! It is illegal to view video while driving or operating a motor vehicle. Set parking brake to view video." Rear video screens, if applicable, will operate normally.

### Insert/Eject Disc


To insert a disc, you must first press the  button (4) to open the front panel and reveal the disc slot. Upon inserting a DVD disc, DVD mode is entered and disc play begins. The disc indicator light (9) dims when a disc is inserted.

**NOTE:** If Parental Lock (Rating) is activated and the disc inserted is not authorized, the 4-digit code must be entered and/or the disc must be authorized. When parental code is entered using the remote, the play/pause button must be pressed to confirm entry. (See "General Sub-menu Features" on page 7.)


You cannot insert a disc if there is already a disc in the unit or if the power is off.

**NOTE:** DVD-R and DVD-RW will not play unless the recording session is finalized and the DVD is closed.

### Ejecting a Disc

Press the  button (11) on the unit or remote control (35) to eject the disc. The unit automatically reverts to Tuner mode. You may eject a disc with the unit powered off. The unit will remain off after the disc is ejected.

### Reset the Loading Mechanism

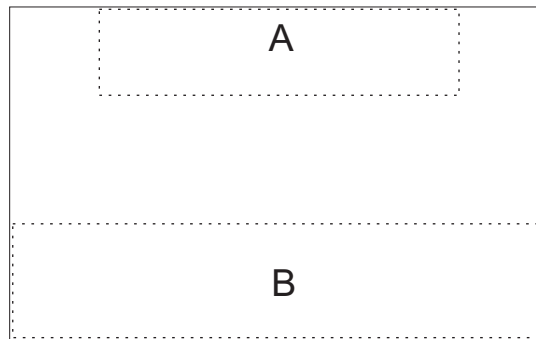
If the disc loads abnormally or an abnormal core mechanism operation occurs, *press and hold* the  button (11) on the unit or remote control (35) to reset the loading mechanism. Normal operation resumes.

### Accessing DVD Mode

To switch to DVD mode when a disc is already inserted, press the **SRC** button (6) on the front panel or remote control (8) or touch the top left corner of the screen.

### Using the Touch-Screen Controls

The touch key areas for DVD playback are outlined below.

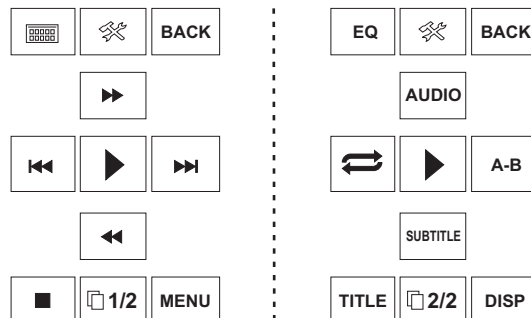


A – Displays playing information



B – Displays on-screen control menu

### Controlling Playback



To access the on-screen controls, touch the bottom 1/3 of the screen (section B). Touch the 1/2 button to view a second page of controls




#### Stopping Playback

Touch the stop button () on the screen or press the  button (20) on the remote control to stop DVD play.



#### Pausing Playback



Touch the play/pause button () on the screen or press the  button on the remote control (18) to suspend or resume disc play.

#### Slow Motion Playback



Press the /BAND button on the remote control for slow motion playback (Slow Forward: 1/2, 1/4, 1/6, 1/7, Slow Rewind: 1/2, 1/4, 1/6, 1/7).



#### Rewind

Press the  button (22) on the remote control or the  button on the screen to play the current title in reverse. Keep pressing and releasing the button to increase the rate from "2X" to "4X", "8X", and "20X".


Press  (18) on the remote control or touch the on screen play button () to resume normal play.

#### Fast Forward Playback

Press the  button (14) on the remote control or the  button on the screen to fast forward. Keep pressing and releasing the button to increase the rate from "2X" to "4X", "8X", and "20X".

Press  (18) on the remote control or touch the on screen play button () to resume normal play.

#### Repeat Playback

Press the **REPT** button (7) on the remote control or the  button on screen to alter repeat mode according to the following:

- DVD: Repeat Chapter, Repeat Title, Repeat Off
- VCD (PBC Off): Repeat Single, Repeat Off

**NOTE:** For VCD play, the repeat function is not available if PBC is on.

#### Sectional Repeat Function (A-B)

Use the A-B function to define a specific area of a disc to repeat.

- Press the **REPT A-B** button (6) on the remote control to set the start point (A) of the repeated section.
- Press the **REPT A-B** button again once you reach the desired end point (B) of the repeated section. The selected portion of the DVD will now repeat continuously.
- Press the **REPT A-B** button again to cancel the A-B section setting and stop repeat play.

#### Random Playback

With a DVD, VCD, or CD playing, press the **RDM** button (33) on the remote control to activate random playback and play all chapters/tracks in random order. "Random on" appears on the screen.

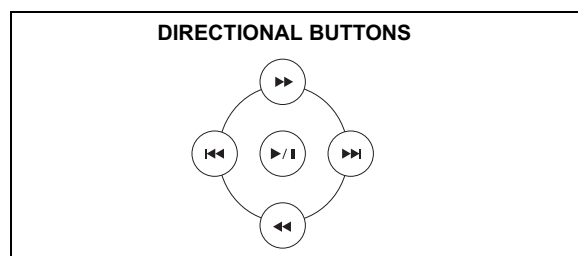
Press the >>| button (19) on the remote control or on screen to play the next random track.

Press the **RDM** button again to turn random play off.

**NOTE:** When a VCD is playing with PBC turned "On", activating random playback automatically turns PBC off.

## Accessing the DVD Menu

Press the **MENU** button (1) on the remote control to recall the main DVD menu. Use the directional buttons on the remote control to select a title from the menu or touch the title on screen.



Press the **TITLE** button (2) on the remote control or on screen to select a different title for playback.

Press the >|| button (18) on the remote control to confirm your selection and begin playback. You can also select a title using the touch screen.

## Moving Through Chapters

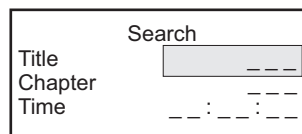
Press the >>| button (19) on the remote control or the >>| button on screen to advance to the next chapter on the DVD. Press the |<< button (17) on the remote control or the |<< button on screen to move to the previous chapter.

## Goto Search

During DVD or VCD playback, perform the following steps to use the GOTO feature to access a specific location on a disc:

1. Press the **GOTO** button (21) on remote control to enter "GO TO" mode.
2. Press the >> or << buttons (14, 22) on the remote control to select a category (highlighted in blue).

- For DVD mode, you can choose Title, Chapter or Time search.

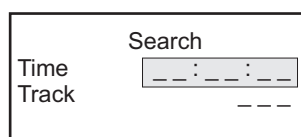


### DVD Search

**Title/Chapter** – Go to specific time in a title/ chapter

**Time** – Go to specific time in current title

- For VCD mode, you can choose Time or Track search.



### VCD Track Search

**Time** – Go to specific time in the current track

**Track** – Go to specific track


3. Enter a time into the field using the numeric keypad (29) on the remote control.
4. Press the >|| button (18) on the remote control to go to the specified location on the disc.
5. Press the **GOTO** button again to exit.

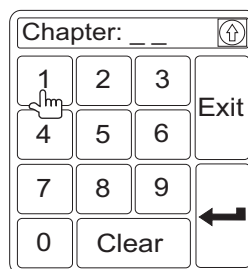
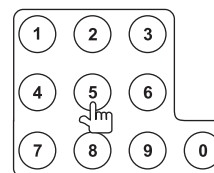
## Direct Chapter / Track Selection

### Remote Control Direct Entry

During DVD, VCD and CD playback, you can use the numeric keypad on the remote control (29) to access a track directly.

### Touch Screen Direct Entry

To select a chapter/track directly, touch the  button on screen control to display the direct entry menu.



Enter the desired chapter/track using the on-screen number pad. Press the enter button (arrow) to tune to the selected station. To exit the screen without changing the station, touch **Exit**. To clear your entry and start over, touch **Clear**.

## Viewing an Alternate Picture Angle (DVD Only)

Some DVDs contain scenes that have been shot simultaneously from different angles. For discs recorded with multiple angles, press the **ANGLE** button (13) on the remote control to toggle available angles of the on-screen image.

## Zooming

Press the **ZOOM** button (23) on the remote control to enlarge and pan through the video image using the following options: "Q1", "Q2", "Q3", "Q4" and "OFF".

## Multi-Language Discs (DVD Only)

### Changing Audio Language

If you are watching a disc recorded in multiple languages, press the **AUDIO** button (5) on the remote control to choose a language.

### Changing Subtitle Language

If you are watching a disc recorded in multiple languages with subtitles, press the **SUBTITLE** button (9) on the remote control to choose the language in which you would like the subtitles to appear.

**NOTE:** During VCD playback, press the **AUDIO** button (5) on the remote control to choose between Left Channel, Right Channel, and Stereo.

## PBC (Play Back Control - VCD Only)

For VCDs with play back functionality, play back control (PBC) provides additional controls for VCD playback.

Press the **MENU** button (1) on the remote control to toggle the PBC function "On"/"Off". Once PBC is on, playback starts from track one of the play list.

**NOTE:** When PBC is activated, fast forward, slow playback, and previous/next track are available. Repeat and direct track selection are not available.

When PBC is activated, selecting random, scan, or search playback automatically deactivates PBC.

## Playback Information

During DVD and VCD playback, press the **DISP** button on the remote control (10) to display playback information on the screen, including the media playing and current playback time.

### DVD Playback Information

The following information is displayed at the top of the screen during DVD playback:

DVD T : 5/8 C : 2/16 00:41:28 2/6 Eng

- T : 5/8 – “5/8” indicates the fifth of 8 titles on the DVD is currently playing.
- C : 2/16 – “2/16” indicates that the second of 16 chapters on the DVD is currently playing.
- 00:41:28 – “00:41:28” indicates the playback time of the current title.
- 2/6 Eng – The language display information indicates the second language out of 6 (English) is currently being used.

### VCD Playback Information

The following information is displayed at the top of the screen during VCD playback:

VCD2.0 T: 6/18 00:02:18

- VCD 2.0 – Format of current disc.
- T: 6/18 – “6/18” indicates the sixth of 18 tracks on the VCD is currently playing.
- 00:02:18 – “00:02:18” indicates the playback time of the current track.

## General Disc Information

Table 4: Disc Properties



| Symbol  | 12cm Disc Properties   | Max Play Time   |
|---|--|---|
|  | Single side single layer (DVD-5)<br>Single side double layer (DVD-9)<br>Double side single layer (DVD-10)<br>Double side double layer (DVD-18) | (MPEG 2 Method)<br>133 minutes<br>242 minutes<br>266 minutes<br>484 minutes |
|  | Single side single layer (VCD)   | (MPEG 1 Method)<br>74 minutes   |

Table 4: Disc Properties







| Symbol  | 12cm Disc Properties     | Max Play Time |
|---|--------------------------|---------------|
|  | Single side single layer | 74 minutes    |

Table 5: Disc Symbols

| Symbol  | Meaning   |
|---|---|
|  | Number of voice languages recorded. The number inside the icon indicates the number languages on the disc (maximum of 8).   |
|  | Number of subtitle languages available on the disc (maximum of 32).   |
|  | Number of angles provided (maximum of 9).   |
|  | Aspect ratios available. “LB” stands for Letter Box and “PS” stands for Pan/Scan. In the example on the left, the 16:9 video can be converted to Letter Box video.  |
|  | Indicates the region code where the disc can be played. <ul style="list-style-type: none"> <li>Region 1: USA, Canada, East Pacific Ocean Islands</li> <li>Region 2: Japan, Western Europe, Northern Europe, Egypt, South Africa, Middle East</li> <li>Region 3: Taiwan, Hong Kong, South Korea, Thailand, Indonesia, South-East Asia</li> <li>Region 4: Australia, New Zealand, Middle and South America, South Pacific Ocean Islands/ Oceania</li> <li>Region 5: Russia, Mongolia, India, Middle Asia, Eastern Europe, North Korea, North Africa, North-West Asia</li> <li>Region 6: Mainland China</li> <li>ALL: All regions</li> </ul> |

## DVD/CD AUDIO OPERATION

Instructions for TFT control and Insert/Eject are the same for DVD and CD operation. Please see the DVD/Disc Video Operation section for information about these topics.

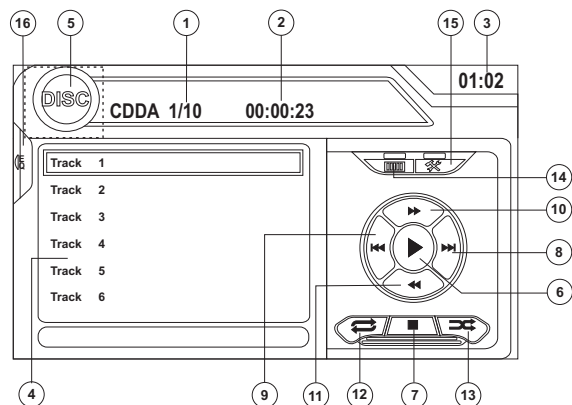
The VM9223 will play music or other audio files from the following disc media:

- CD-DA
- CD-R/RW
- DVD
- DVD+R/RW
- DVD-R/RW

Upon inserting a disc, the disc and track title (if available), along with the track number and playing time appear on the screen.

### CD Player User Interface

The on-screen indicators and touch key areas for CD playback are outlined below.



1. Current track and total number of tracks on disc
2. Elapsed playing time
3. Current time
4. Track titles
5. Touch to view the SOURCE MENU and select a new playback source
6. ►/||: Touch to play/pause disc playback
7. ■: Touch to stop disc playback
8. >>|: Touch to move to next track
9. |<<: Touch to move to previous track
10. >>>: Touch to fast forward current track
11. <<<: Touch to rewind current track

12. Touch to activate/deactivate Repeat play mode
13. Touch to activate/deactivate Random mode
14. Touch to access the direct entry screen
15. ⚙️: Touch to view the SETUP menu
16. Touch for quick access to Equalizer level settings

### Controlling Playback

#### Stopping Playback

Touch the ■ button on screen or press the ■ button (20) on the remote control to stop disc play.

To resume playback, touch the ►/|| button on screen or press the >/|| button on the remote control (18).

#### Pausing Playback

Touch the ►/|| button on screen or press the >/|| button on the remote control (18) to suspend or resume disc play.

#### Moving Through Tracks

Press the >>| button (19) on the remote control or on screen to advance to the next track on the disc.

Press the |<< button (17) on the remote control or on screen to move to the previous track.

#### Repeat Playback

Touch the ⇄ button on screen or press the REPT button (7) on the remote control to alter repeat mode according to the following:

- DVD: Repeat Chapter, Repeat Title, Repeat Off
- CD-DA: Repeat Single, Repeat Off
- CD-R/RW: Repeat Single, Repeat Off
- DVD-R/RW: Repeat Single, Repeat Off

#### Intro Scan (CD-DA discs only)

During disc play, press the INT button (34) on the remote control to play the first 10 seconds of each track. When a desired track is reached, press the INT button again to cancel the function and play the selected track.

#### Random Play Select

While disc play is stopped, touch the ⇄ button on screen or the RDM button (33) on the remote control to play the tracks on the disc in a random, shuffled order. Touch the ⇄ (RDM) button again to cancel Random Play mode.

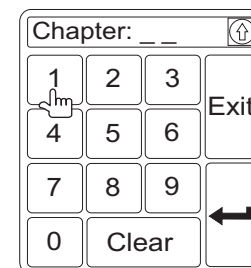
**NOTE: CD-R and CD-RW will not play unless the recording session is finalized.**

### Fast Forward

Touch the >>> button on screen or press the >>> button (14) on the remote control to fast forward. Keep pressing and releasing the button to increase the rate from "2X" to "4X", "8X", and "20X".

### Direct Track Entry

To select a track directly, touch the [0000] button on screen control to display the direct entry menu.



Enter the desired track using the on-screen number pad. Press the enter button (arrow) to tune to the desired track. To exit the screen without changing the track, touch **Exit**. To clear your entry and start over, touch **Clear**.



## MP3/WMA OPERATION

Instructions for TFT control and Insert/Eject are the same for DVD and MP3 operation. Please see the DVD/Disc Video Operation section for information about these topics.

### Media and File Requirements

This player allows you to play back MP3 and WMA files recorded onto CD-R/RWs, DVD+R/RWs, and DVD-R/RWs. For CD-RW discs, please make sure it is formatted using the full method and not the quick method to prevent illegal disc operation. This unit will also display photos.

Up to 1500 songs/files can be burned onto a disc for a MEGA DVD music mix. Do not exceed this number of songs/files or disc readability problems may occur.

#### MP3 Format Compatibility

The file naming formats listed below are compatible with this unit:

- ISO 9660 – file name: 12 characters, file extension: 3 characters
- ISO 9660 – file name: 31 characters, file extension: 3 characters
- Joliet – 64 characters

If the file or folder name does not conform to ISO 9660 system standards, it may not be displayed or played back correctly. Use the following settings when compressing audio data for your MP3 disc:

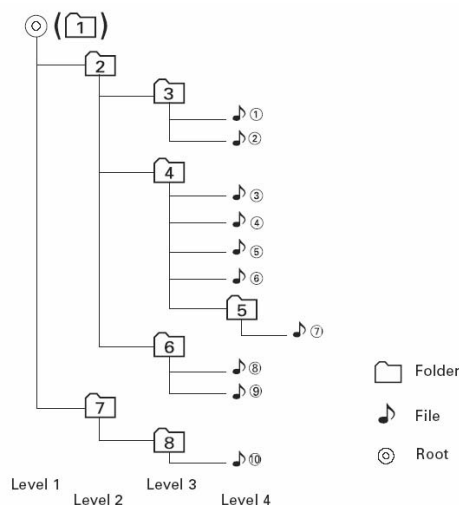
- Transfer Bit Rate: 128kbps
- Sampling Frequency: 48kHz

When recording MP3 up to the maximum disc capacity, disable additional writing. For recording on an empty disc up to maximum disc capacity, use the "Disc at once" setting.

### MP3 Playing Order

When selected for play, files and folders are accessed in the order they were written by the CD writer. As a result, the order in which they are expected to be played may not match the order in which they are actually played. You may be able to set the order in which MP3/WMA files are to be played by writing them onto a medium such as a CD-R with their file names beginning with play sequence numbers such as "01" to "99".

For example, a medium with the following folder/file hierarchy is subject to Folder Search, File Search or Folder Select, as shown below.



The VM9223 player will only recognize three folder levels and does not display folders containing only other folders. In the example above, the unit will display folders 3, 4, 6, and 8, but not 2 and 7 since they do not contain any tracks directly. Folder 5 is not recognized at all since it is at the fourth level.

### Inserting a USB Device

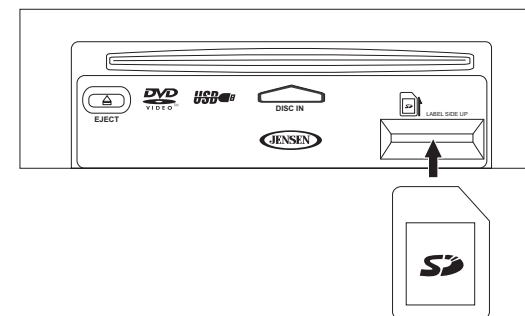
**NOTE: The USB port will recognize most USB flash memory devices.**

1. Locate the USB connector. The USB pigtail on the back of the unit should be brought around to an accessible place during installation.
2. Insert the USB device into the USB connector. The unit will read the audio/video files on the USB device automatically.

To remove the USB device, press the **SRC** button (6) to switch to another mode and then remove the USB device from the USB connector.

### Loading an SD Card

To Insert an SD card, you must first press the **▲/EJECT** button on the control panel (5) or remote control (23) to reveal the SD card slot (14). Insert the SD card into the card slot and the unit will read the media files on the card automatically.

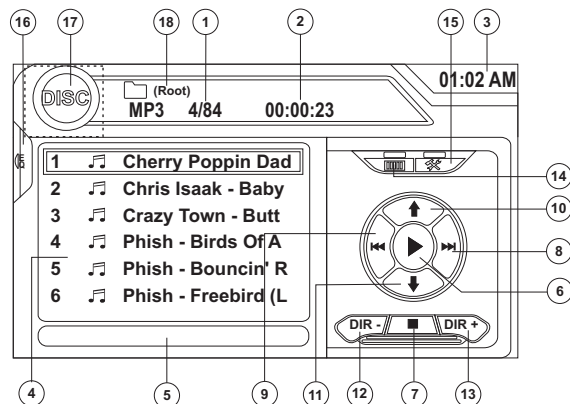


To remove the card, first press the **SRC** button (6) to switch to another mode and stop SD playback. Push in and release to pop the card out. Grasp the SD card and pull it straight out. Most cards have a thin recess that helps with removal.



## MP3 Player User Interface

The on-screen indicators and touch key areas for MP3 playback are outlined below.



1. Current file and total number of files on your media device
2. Elapsed playing time
3. Current time
4. Track titles
5. ID3 information
6. ►/||: Touch to play/pause disc playback
7. ■: Touch to stop disc playback
8. >>|: Touch to move to next track
9. |<<: Touch to move to previous track
10. ↑: Touch to view the next page of songs
11. ↓: Touch to view the previous page of songs
12. DIR -: Touch to view the previous folder
13. DIR +: Touch to view the next folder
14. Touch to access the direct entry screen
15. ⚙️: Touch to view the SETUP menu
16. Touch for quick access to Equalizer level settings
17. Touch to view the SOURCE MENU and select a new playback source
18. Folder name

## Controlling MP3/WMA Playback

### Playing MP3/WMA Files

After inserting a MP3/WMA disc, files will play in the sequence of the "Root" directory.

**NOTE:** When burning MP3 / WMA files onto a DVD disc, use the 2X or 4X burning option, if available. This slower burning speed will help eliminate buffer errors and increase disc reading reliability. Also, use folders when burning large numbers of songs / files to a disc for easy music navigation. Select the "Disc at Once" option and close your disc.

### Stopping Playback

Touch the ■ button on screen or press the ■ button (20) on the remote control to stop disc play.

To resume playback, touch the ►/|| button on screen or press the >/|| button on the remote control (18).

### Pausing Playback

Touch the ►/|| button on screen or press the >/|| button on the remote control (18) to suspend or resume disc play.

### Moving Through Tracks

Press the >>| button (19) on the remote control or on screen to advance to the next track on the disc.

Press the |<< button (17) on the remote control or on screen to move to the previous track.

### Repeat Playback

Touch the ⇄ button on screen or press the REPT button (7) on the remote control to alter repeat mode according to the following: Repeat Single, Folder Repeat, Repeat Off

### Random Play Select

Press the RDM button (33) on the remote control to play the files on the disc in a random, shuffled order. Press RDM again to cancel Random Play mode.

### Intro Scan

During playback, press the INT button (34) on the remote control to play the first 10 seconds of each file. When the desired track is reached, press INT again to end the scan and play the selected file.

**NOTE:** CD-R and CD-RW will not play unless the recording session is finalized.

### Direct Track Entry

Use the numeric keypad (29) on the remote control to access files directly or press the [0000] button (see "Direct Track Entry" on page 13).

## Viewing Photos

While viewing picture files, press the INT button (34) on the remote control to view a thumbnail display of available pictures. Press the ANGLE button (13) on the remote control to rotate the selected picture 90 degrees each time the button is pressed.

## BLUETOOTH OPERATION

### About Bluetooth


Bluetooth is a short-range wireless radio connectivity technology that is developed as a cable replacement for mobile phones, handheld PCs and other devices. Bluetooth operates in 2.4 GHz frequency range and transmits voice and data at speeds up to 1 megabit per second. Bluetooth was launched by a special interest group (SIG) comprised of Ericsson Inc., Intel Corp., Nokia Corp., Toshiba and IBM in 1998, and it is currently developed by nearly 2,000 companies worldwide. The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Audiovox Corporation is under license. Other trademarks and trade names are those of their respective owners.

**NOTE:** The line-of-sight distance between this unit and your cellular phone must be 8 meters or less for sending and receiving voice and data via Bluetooth wireless technology. However, the transmission distance may become shorter than the estimated distance, depending on the environment in use.

Before attempting to use the Bluetooth functions on the VM9223, you must purchase and install the BTM10. When connected properly, the blue light appears illuminated. Bluetooth features are only available when the BTM10 is installed.

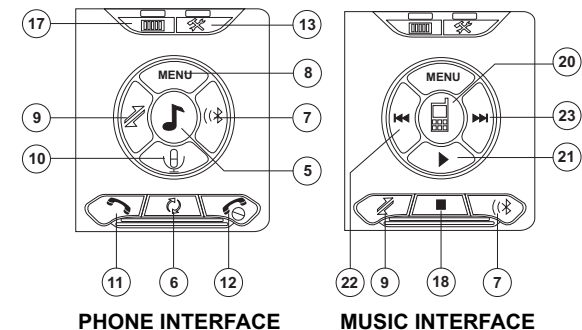
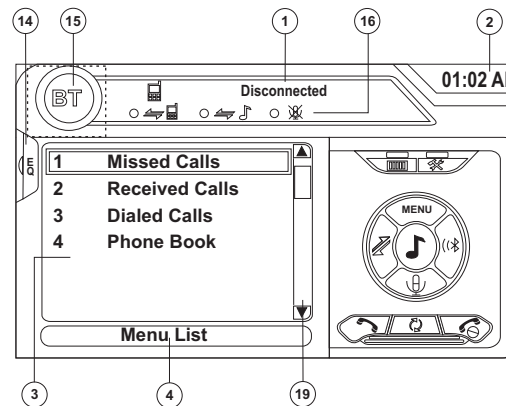
Please make sure your mobile phone supports Bluetooth functions (Headset or Handsfree profiles or both). Adhere to the following guidelines for successful operation.




- Before using Bluetooth functions, you must pair your mobile phone to the VM9223 head unit (see "Pairing the Bluetooth System with Your Mobile Phone and Head Unit"). To ensure the best reception for pairing and re-connection, please make sure the phone battery is fully charged before you begin.
- Try to perform pairing within a few minutes of the phone being turned on.
- Once the unit has been paired with the phone, the unit's model number, "VM9223", will be displayed on the mobile phone.
- To achieve the best performance, always keep the mobile phone within 3 meters of the head unit.
- Always keep a clear path between the mobile phone and the head unit. Never place a metal object or any other obstacle between the mobile phone and the head unit.

- Some mobile phones (like Sony Ericsson) may have a "Power Saving Mode" option. PLEASE DO NOT use the power saving mode with the VM9223.
- Before accepting or making a call, make sure your mobile phone's "Bluetooth function" is turned on.
- To ensure the best conversation quality/performance, stay within one meter of the BTM10 when talking.
- To "disconnect" the mobile phone from the head unit, turn the Bluetooth connectivity off on the mobile phone or touch the  button.
- **Phone Book direct searching through the head unit is only available if the mobile phone supports Phone Book Download.** If the feature is not supported, the head unit will display "Phone book not provided by this phone" when an attempt is made to download a phone book.

### Bluetooth User Interface

The on-screen indicators and touch key areas for Bluetooth operation are outlined below.





1. Current connection status/device connected
2. Current time
3. Bluetooth menu
4. Current operation status
5. Toggle Music/Phone menu
6. Transfer active call back to handset
7. Pair your Bluetooth phone (first time use)
8. Exit call listing display
9. Connect/disconnect Bluetooth device (phone, PDA, personal music player, etc.) with hand-free function
10. Mute/un-mute microphone during active call
11. Answer incoming call/make call
12. Reject incoming call/end call/quit pairing process/quit reading phone book or call listing
13. Touch to view the SETUP menu
14. Touch to view the equalizer
15. Touch to view the SOURCE MENU and select a new playback source
16. Status indicators (phone mode, music mode, mic mute)
17. Touch to access the direct entry screen
18. : Touch to stop A2DP playback
19. Touch the scroll bar and arrows to view the previous/next page of choices (only visible when needed)
20. Toggle Music/Phone menu/mode
21. Play/Pause selected file
22. : Touch to move to the previous file
23. : Touch to move to the next file

## Hands Free Profile (HFP)

To use a phone wirelessly with this unit, it is necessary to first establish a connection using Bluetooth wireless technology. Connection is normally established using HFP (Hands Free Profile), which gives you full control of functions available on the telephone source. However, depending on your phone, the connection may be made using HSP (Head Set Profile), making some functions unavailable. This is a limitation of your phone, not the VM9223.

Since there are a number of Bluetooth mobile phone implementations available on the market, operations with your Bluetooth mobile phone using this unit vary greatly. Please refer to the instruction manual that came with your Bluetooth mobile phone along with this manual while operating your phone with this unit.


## Pairing the Bluetooth System with Your Mobile Phone and Head Unit

1. Press the  button (7) to initiate the pairing process. Keep the mobile phone within 2 meters of the head unit when pairing. (To terminate the pairing process, press the  button again.)
2. Select the Bluetooth setup option on the mobile phone to be paired (please refer to the phone's instruction manual to learn how to enter Bluetooth setup, turn Bluetooth on/off, and perform pairing).


**NOTE: Some phones require a "pass key" or pairing code to connect. If your phone requires a pass key or pairing code, you will need to enter this number in the Pairing Code field under the Bluetooth SETUP menu. The default pairing code for many phones is "0000". The default code for the VM9223 is "1234". See "Bluetooth Sub-menu Features" on page 8 for instructions on entering the pairing code.**

3. Select "VM9223" from the pairing list on the mobile phone.
  - If pairing is successful, the TFT will display the paired mobile phone model number or name (as specified in your phone's Bluetooth Setup menu).
  - If pairing fails, "Phone Pairing Fail" is displayed at the bottom of the screen.

## Reconnecting

Once the Bluetooth device has been paired, you can touch the connect  button (9) to reconnect.

**NOTE: You can only connect to a phone using the buttons on the on-screen Phone interface.**

Each time the  button is pressed, the head unit will automatically reconnect with the mobile phone once (only if the mobile phone was previously paired with the head unit).

## Managing Incoming Calls


When connected to a Bluetooth phone, the unit will mute audio output, pause CD play, and change to the Bluetooth screen when a call is received. An incoming phone number will appear at the top of the screen.

### Answering an Incoming Call


To answer the call, touch the  button (11).

**NOTE: The TALK button on the BTM10 can be used to answer calls or hang up.**

For best reception, speak loudly and clearly.

To end the conversation, press the  button (12). The screen will display the call duration for 3 seconds, and then return to the previous mode.


### Rejecting an Incoming Call

Touch the  button to reject an incoming call. The call will revert to your phone and can be answered directly or left for voice mail.

### Volume Control


To increase or decrease the volume level press the **VOL+ / VOL-** buttons on the front panel (5) or on the remote control (15, 16).

### Microphone Mute



To mute the microphone, touch the  button (10). Touch again to resume microphone functionality.

## Making an Outgoing Call

**NOTE: Press the  button from the main Bluetooth screen to automatically dial the last call received.**


1. Touch the  button to open the direct dial screen.

|   |   |   |   |
|---|---|---|---|
|   |   |   |   |
| 1 | 2 | 3 | Exit  |
| 4 | 5 | 6 | Clear   |
| 7 | 8 | 9 |  |
| * | 0 | # |  |

2. Use the 0-9, \*, and # buttons to input the phone number.
  - Touch the **CLEAR** button to clear the last digit.
  - Touch the  button to clear the entire number and start over.
3. After entering the phone number, press the  button to dial the call. The direct dial screen will close once your call is connected.

To end the conversation, press the  button.

## Call Transfer


While talking, to transfer audio from the head unit back to the mobile phone, touch the  button (6). The TFT will display "Transfer". You can only transfer a call after it has been answered.

## Menu List


The menu list appears on the left side of the screen and can be accessed from other modes by touching the **MENU** button on the right side of the screen.

**NOTE: Not all phones allow access to missed, received or dialed calls and some will not allow uploading of your phone's address book.**


### Missed Calls

The Missed Calls list retrieves the list of Missed numbers from your phone. The last missed number is the first number on the list. Touch the Missed Calls menu option to view the list. To make a call from the Missed Calls list, touch the number and then touch the  button. The TFT will display "Cannot get missed record" when the feature is not available.


### Dialed Calls

The Dialed Calls list retrieves the list of dialed numbers from your phone. The last dialed number is the first number on the list. Touch the Dialed Calls menu option to view the list. To make a call from the Dialed Calls list, touch the number and then touch the  button. The TFT will display "Cannot get dialed record" when the feature is not available.

### Received Calls

Use the Received Calls list to view the last 10 received numbers stored on your phone. To access the Received list, touch the Received Calls menu option. The last received number is the first number on the list. To make a call from the Received Calls list, touch the number and then touch the  button. The TFT will display "Cannot get received record" when the feature is not available.

### Phone Book


1. Touch the Phone Book menu option to display the phone book stored on your mobile phone, if compatible. The screen will display "Ready..." while the phone book is downloading.
2. Once the download is completed, you can use the arrow buttons and scroll bar on the right side of the window to navigate the list. Since the unit downloads one page of entries at a time, there may be a slight delay while the next page of numbers is downloaded.
3. Touch to highlight the number you want to dial and then touch the  button.

**NOTE: Some mobile phones do not support Phone Book upload through Bluetooth. This is a limitation of the phone, not the VM9223.**

## Bluetooth Setup


### Auto Answer


You can choose to have the VM9223 automatically answer incoming calls to your paired Bluetooth phone. To turn "Auto answer" on:

1. Touch the  button to view the SETUP menu.
2. Select the "Bluetooth" sub-menu.
3. Touch the area to the right of "Auto answer" to select "On".

### Auto Connect

The auto Connect option will allow the VM9223 to automatically connect to your previously paired Bluetooth when it is in range. When the Connect option is set to

"Manual", you must press the  button to re-establish a connection with your phone. To turn auto "Connect" on:

1. Touch the  button to view the SETUP menu.
2. Select the "Bluetooth" sub-menu.
3. Touch the area to the right of "Connect" to select "Auto".

## Advanced Audio Distribution Profile (A2DP)

The VM9223 allows you to play back audio files from your phone, PDA or personal music player using a Bluetooth connection.

Before using an audio player, it may be necessary to enter a PIN code into the unit. Enter the PIN code referring to "Bluetooth Sub-menu Features" on page 8.

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**NOTE: Please quit A2DP mode before attempting to make a phone call, as unexpected results may occur depending on your mobile phone model.**

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The VM9223 can control a Bluetooth audio player via Advanced Audio Distribution Profile (A2DP) or Audio/Video Remote Control Profile (AVRCP). Bluetooth audio players (or Bluetooth adapters) compatible with these profiles can be connected to this unit. Functionality varies depending on the profile used.

## TROUBLESHOOTING

**Table 6: Troubleshooting**

| Problem  | Cause  | Corrective Action   |
|--|--|---|
| <b>GENERAL</b>   |  |   |
| Unit will not power on                                 | Radio Fuse blown   | Install new fuse with correct rating  |
|  | Car battery fuse blown                                     | Install new fuse with correct rating  |
|  | Illegal operation  | Press the RESET button located in the bottom right corner of the front panel  |
| Remote control does not function                       | Battery depleted   | Replace battery with new one  |
|  | Battery installed incorrectly                              | Remove battery and install correctly  |
| No/low audio output                                    | Improper audio output connection                           | Check wiring and correct  |
|  | Volume set too low   | Increase volume level   |
|  | Improper "MUTE" connection                                 | Review wiring diagram and check "MUTE" connection                             |
|  | Speakers damaged   | Replace speakers  |
|  | Heavily biased volume balance                              | Adjust the channel balance to the center position                             |
|  | Speaker wiring is in contact with metal part of car        | Insulate all speaker wiring connections                                       |
| Poor sound quality or distortion                       | Pirated disc is in use                                     | Use original copy   |
|  | Speaker power rating not compatible with unit              | Connect proper speakers   |
|  | Speaker is shorted   | Check speaker contact   |
| Tel-Mute malfunction                                   | "MUTE" wire is grounded                                    | Check that "MUTE" connection is not grounded and that it's properly insulated |
| Unit resets itself when engine is off                  | Incorrect connection between ACC and positive battery wire | Check wiring and correct  |
| <b>TFT MONITOR</b>                                     |  |   |
| No image   | Incorrect connection to parking brake wire                 | Check wiring and correct  |
|  | PRK SW is activated and parking brake is not engaged       | Stop vehicle in safe place and apply parking brake                            |
| Flashing image or interference appears on screen       | DVD is not compatible with current TV system settings      | Change setup to accommodate disc  |
|  | Improper video signal connections                          | Check wiring and correct  |
| Prolonged image or improper height/width ratio display | Improper aspect ratio setup                                | Use correct aspect ratio setting  |
| Monitor stops at incorrect position                    | Moving path is blocked                                     | Press OPEN button to restart monitor movement                                 |
| <b>TUNER</b>   |  |   |
| Weak station searching                                 | Auto antenna is not fully extended                         | Connect the auto antenna control cable properly                               |
|  | Auto antenna not properly connected                        | Connect the auto antenna control cable properly                               |
|  | LOCAL function is activated                                | Turn LOCAL function off   |
| <b>DISC</b>  |  |   |
| Cannot insert disc                                     | Disc already inside unit                                   | Eject current disc and insert new one   |

Table 6: Troubleshooting

| Problem                                  | Cause  | Corrective Action                                  |
|--|--|--|
| Disc does not play back                  | Disc is warped or scratched                    | Use disc in good condition                         |
|  | Disc is dirty or wet                           | Clean disc with soft cloth                         |
|  | Laser pickup is dirty                          | Clean laser pickup with cleaning disc              |
|  | Incompatible disc is used                      | Use compatible disc                                |
|  | Disc rating exceeds Parental Lock rating limit | Change Parental Lock settings to lower restriction |
|  | Disc region code is not compatible with unit   | Use disc with proper region code                   |
|  | Disc is inserted upside down                   | Insert disc with label side up                     |
| Image blurred, distorted, or dark        | Disc is illegally copied                       | Use original disc                                  |
| PBC cannot be used during VCD playback   | PBC is not available on the disc               |  |
| No repeat or searching while playing VCD | PBC is on                                      | Turn PBC off                                       |
| MP3                                      |  |  |
| Interruption occurred during playback    | Disc is dirty or scratched                     | Clean disc or replace                              |
|  | File is damaged/bad recording                  | Recreate disc with good files                      |
| Incorrect playback message displayed     | Message is longer than LCD can display         |  |

## Error Messages

Table 7: Error Messages

| Message Displayed | Cause  | Corrective Action  |
|-------------------|--|--|
| Loading           | Disc is being read                             |  |
| No Disc           | Disc is dirty                                  | Clean disc with soft cloth                               |
|                   | Disc is upside down                            | Insert disc with label side up                           |
|                   | Disc not present in loading compartment        | Insert disc  |
| Bad Disc          | Disc is dirty                                  | Clean disc with soft cloth                               |
|                   | Disc is upside down                            | Insert disc with label side up                           |
| Unknown disc      | Disc format is not compatible with this unit   |  |
| Region Error      | DVD is not compatible with region code of unit |  |
| Error             | Illegal mechanism operation                    | Press EJECT key for 5 seconds to reset loading mechanism |

## Care and Maintenance

1. Use only a clean silicone cloth and neutral detergent to clean the front panel or monitor. A rough cloth and non-neutral detergent (such as alcohol) may result in scratching or discoloration.
2. Do not get water or cleaning fluids on the unit.
3. If the temperature inside the player gets too hot, a protective circuit automatically stops play of the disc. If this occurs, allow the unit to cool before operating the player again.
4. Never insert anything other than a 5" (12 cm) compact disc into the player as the mechanism can be damaged by foreign objects.
5. Do not attempt to use a 3" (8 cm) CD-Single disc in this unit, either with or without an adaptor, as damage to the player and/or disc may occur. Such damage is not covered by the Warranty on this product.
6. The CD player may not operate properly in extreme hot or cold. If such conditions occur, allow the interior of the vehicle to reach a normal temperature before using player.
7. When the vehicle warms up during cold weather or under damp conditions, condensation may appear on the LCD panel. Should this occur, the screen will not operate properly until the moisture has evaporated.
8. We suggest you use a cleaning disc in this unit more frequently than in the unit in your home due to the environmental conditions of the vehicle.

## SPECIFICATIONS

### DVD/CD Player

Compatible Disc Media: DVD + R / RW (Single and Dual Layer) and CD-R / RW  
 Compatible Media Formats: CD-DA, MP3, WMA, VCD, SVCD, AVI, MPEG1 / 2, XviD and Kodak picture CD (JPEG).  
 Signal to Noise Ratio: >95dBA  
 Dynamic Range: >95dB  
 Frequency Response: 20Hz to 20 kHz, -3dB  
 Channel Separation: > 60dB @ 1 kHz  
 D/A Converter: High performance 24-bit / 192 kHz sample rate, Multi-Bit Sigma-Delta Modulator

### Video

Format: NTSC, PAL (auto-detection)  
 Output: 1Vp-p (75-ohm)  
 Input: 1Vp-p (75-ohm)

### FM Tuner (USA)

Tuning Range: 87.5MHz - 107.9MHz  
 Mono Sensitivity (-30dB): 9dBf  
 Quieting Sensitivity (-50dB): 15dBf  
 Alternate Channel Selectivity: 70dB  
 Signal to Noise Ratio @ 1 kHz: 58dB  
 Image Rejection: 80dB  
 Stereo Separation @ 1 kHz: >30dB  
 Frequency Response: 30Hz - 15 kHz, -3dB

### AM Tuner (USA)

Tuning Range: 530 kHz - 1720 kHz  
 Sensitivity (-20dB): 12uV  
 Signal to Noise Ratio @ 1 kHz: 50dB  
 Image Rejection: 60dB  
 Frequency Response: 50Hz - 2 kHz, -3dB

### Monitor

Screen Size: 7.0" (Measured diagonally), 16:9 Widescreen  
 Screen Type: TFT Liquid Crystal Display (LCD) active matrix  
 Response Time: 30mSec rise time, 50mSec fall time  
 Resolution: 336,960 sub pixels, 1440 (W) X 234 (H)  
 Viewing angle:

- 60 degrees left or right
- 40 degrees up
- 55 degrees down

### General

Auxiliary Input impedance: 10k  
 Power Supply: 11 to 16VDC, negative ground  
 Power Antenna (Blue): 500mA max, current limited protection  
 Amplifier Remote (Blue/White): 500mA max, current limited protection  
 Operating Temperature: -20C ~ 65C  
 Fuse: 15-amp, ATC type  
 DIN chassis dimensions: 7" X 7" X 4" (178mm x 178mm x 100mm)

### CEA Power Ratings



Power Output: 13 Watts RMS x 4 channels into 4-Ohms @ < 1% THD+N  
 Signal to Noise Ratio: 70dBA below reference (Reference: 1 Watt, 4-Ohms)  
 Frequency Response: 20 Hz - 20 kHz, -3dB. (Aux Input used as reference input)  
 Reference Supply Voltage: 14.4VDC

*\*Specifications subject to change without notice.*



# Limited Warranty

CD or Multimedia Radios/Headunits

DO NOT RETURN THIS PRODUCT TO THE STORE

Audiovox Electronics Corporation ("the Company") is committed to quality and customer service, and are pleased to offer you this Warranty. Please read it thoroughly and contact the Company at 1-800-323-4815 with any questions.

## Who is covered?

The Company extends this warranty to the original retail purchaser of products purchased through an authorized Audiovox retailer in the U.S.A., Puerto Rico or Canada. This warranty is not transferable or assignable. Proof of purchase is required in the form of an original sales receipt.

## What is covered?

The Company warrants that should this product or any part thereof, under normal use, be proven defective in material or workmanship within 12 months from the date of original purchase, such defect(s) will be repaired or replaced with a new or reconditioned product (at the Company's option) without charge for parts and repair labor.

## What is not covered?

This Warranty *does not* cover the following:

- Damage incurred during shipping or transporting the product to the Company or a service center
- Elimination of car static or motor noise
- Defects in cosmetic, decorative or non-operative structural parts
- Correction of antenna problems
- Costs incurred for installation, removal or reinstallation of the product
- Consequential damage to compact discs, USB devices, digital media cards, accessories or vehicle electrical systems
- Damage caused by improper installation, mishandling, misuse, neglect, accident, blown fuse, battery leakage, theft or improper storage
- Products whose factory serial number/bar code label(s) or markings have been removed or defaced
- Damage resulting from moisture, humidity, excessive temperature, extreme environmental conditions or external natural causes

Please review the "Care and Maintenance" section of your Installation and Operation Manual for additional information regarding the proper use of your product.

## Limitations

THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT.

This Warranty is in lieu of all other express warranties or liabilities. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY HEREUNDER INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY MUST BE BROUGHT WITHIN A PERIOD OF 24 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

## Obtaining Warranty Service

- To obtain repair or replacement within the terms of this Warranty, call 1-800-323-4815 for the location of a warranty station serving your area.
- You must prepay the initial shipping charges to the Company. The Company will pay the return shipping charges for all warranted products returned to an address within the U.S.A., Puerto Rico or Canada.
- Please package the product securely to avoid shipping damage. We recommend using a carrier that provides tracking service to prevent lost packages. Lost or damaged packages are not covered by this warranty.
- Provide a detailed description of the problem(s) for which you require service.

# Garantía Limitada

*Radios del CD o de los Multimedia*

**NO RETORNE ESTE PRODUCTO A LA TIENDA**

Audiovox Electronics Corporation (“la Compañía”) es una corporación comprometida con la calidad y el servicio al cliente, y se complace en ofrecerle esta Garantía. Por favor, léala completamente y contacte a la Compañía al 1-800-323-4815 por cualquier duda.

## **¿Quién está cubierto?**

La Compañía extiende esta garantía al comprador minorista original de los productos comprados a un distribuidor Audiovox autorizado en USA, Puerto Rico o Canadá. Esta garantía no es transferible o asignable. Se requiere prueba de compra en forma de recibo de venta original.

## **¿Qué está cubierto?**

La Compañía garantiza que si este producto o cualquier parte del mismo, bajo uso normal, se prueba que tiene defectos en materiales o mano de obra dentro de los 12 meses desde la fecha de compra original, dichos defectos serán reparados o reemplazados con un producto nuevo o reacondicionado (a opción de la Compañía) sin costos por repuestos o por labor de reparación.

## **¿Qué no está cubierto?**

Esta Garantía *no cubre* lo siguiente:

- Daños ocurridos durante el envío o transporte del producto a la Compañía o al centro de servicio
- Eliminación de estática o ruido de motor
- Defectos en cosmética, partes estructurales decorativas o no operativas
- Corrección de problemas de antena
- Costos incurridos por instalación, retiro o reinstalación del producto
- Daños consecuentes a discos compactos, dispositivos USB, tarjetas multimedia digitales, accesorios o sistemas eléctricos del vehículo
- Daños causados por instalación inadecuada, mal manejo o uso, negligencia, accidentes, fusibles quemados, goteras en la batería, robo o almacenamiento inadecuado.
- Productos cuyo número de serie o código de barra de fábrica o sus marcas hayan sido quitados o borrados
- Daños resultantes de la humedad, temperatura excesiva, condiciones medioambientales extremas o causas naturales externas

**Por favor, revea la sección “Cuidados y Mantenimiento” de su Manual de Instalación y Operación para obtener información adicional relacionada al uso adecuado de su producto.**

## **Limitaciones**

LA EXTENSIÓN DE LA RESPONSABILIDAD DE LA COMPAÑÍA BAJO ESTA GARANTÍA SE LIMITA A LA REPARACIÓN O REEMPLAZO PROVISTO ARRIBA Y, EN NINGÚN CASO, EXCEDERÁ LA RESPONSABILIDAD DE LA COMPAÑÍA EL PRECIO DE COMPRA PAGADO POR EL COMPRADOR DEL PRODUCTO.

Esta Garantía está en lugar de todas las otras garantías o responsabilidades. CUALQUIER GARANTÍAS IMPLICADAS, INCLUYENDO CUALQUIER GARANTÍA IMPLICADA DE MERCANTIBILIDAD, SERÁ LIMITADA A LA DURACIÓN DE ESTA GARANTÍA ESCRITA. CUALQUIER ACCIÓN POR INCUMPLIMIENTO DE CUALQUIER GARANTÍA AQUÍ ESPECIFICADA INCLUIDA CUALQUIER GARANTÍA IMPLÍCITA DE MERCANTIBILIDAD DEBE SER LLEVADA A CABO DENTRO DE UN PERÍODO DE 24 MESES DESDE LA FECHA DE COMPRA ORIGINAL. EN NINGÚN CASO LA COMPAÑÍA SERÁ RESPONSABLE POR NINGÚN DAÑO CONSECUENTE O INCIDENTAL POR INCUMPLIMIENTO DE ESTA O CUALQUIER OTRA GARANTÍA, EXPRESA O IMPLICADA, DE NINGUNA FORMA. No se autoriza a ninguna persona o representante a asumir por parte de la Compañía ninguna responsabilidad diferente a la aquí expresada en conexión con la venta de este producto.

Algunos estados no permiten limitaciones sobre el tiempo de duración de una garantía implicada o de la exclusión o limitación de daños incidentales o consecuentes, entonces las limitaciones y exclusiones antes mencionadas pueden no aplicarle a usted. Esta Garantía le da derechos legales específicos y usted también puede tener otros derechos que pueden variar de estado en estado.

## **Obteniendo el Servicio de Garantía**

- Para obtener reparación o reemplazo dentro de los términos de esta Garantía, llame al 1-800-323-4815 por la ubicación de un servicio de garantía en su área.
- Usted debe pagar previamente los costos de envío inicial a la Compañía. La Compañía pagará los costos de envío de retorno de todos los productos en garantía enviados a direcciones dentro de USA, Puerto Rico o Canadá.
- Por favor empaque el producto de forma segura para evitar daños en el transporte. Recomendamos usar una empresa de transporte que provea servicio de rastreo para prevenir la pérdida de paquetes. Paquetes perdidos o dañados no están cubiertos por esta garantía.
- Provea una descripción detallada del problema o problemas por los cuales usted requiere servicio.

# Garantie Limitée

*Radios CD ou Multimédia / Unités principales*

**NE RENVOYEZ PAS CE PRODUIT AU MAGASIN**

**Audiovox Electronics Corporation (la Société) s'engage à la qualité et au service des clients, et est content de vous offrir cette garantie. Nous vous prions de le lire attentivement et prendre contact avec la Société au 1-800-323-4815 avec des questions.**

## ***Qui est couvert ?***

La Société étend cette garantie à l'acheteur d'origine en détail des produits achetés à un détaillant autorisé d'Audiovox aux Etats-Unis, Puerto Rico ou Canada. Cette garantie ne peut pas être transférée ni aliénée. Preuve d'achat est exigé sous forme du récépissé de vente d'origine.

## ***Ce qui est couvert ?***

La Société garantit que si ce produit ou une partie de ce produit, sous l'utilisation normale par l'acheteur d'origine, dans des conditions normales, s'avère défectueux en matériel ou en artisanat, dans 12 mois depuis la date d'achat d'origine, de tels défauts seront réparés ou remplacés avec un nouveau produit ou un produit reconditionné (à la seule discrétion de la société) sans frais pour les pièces de rechange ou le travail réparateur.

## ***Ce qui n'est pas couvert ?***

Cette garantie *ne* couvre pas le suivant :

- Des dommages survenus lors de la transportation de ce produit à la Société ou à un centre d'entretien.
- Elimination des parasites de voiture ou le bruit du moteur
- Des défauts dans des parties cosmétiques, décoratives ou structurelles non-opératives
- Rectification des problèmes d'antenne
- Le coût de l'installation, de l'enlèvement ou de la réinstallation du produit
- Dommages indirects aux disques compacts, des engins USB, des cartes de média digitales, des accessoires ou le système électrique du véhicule
- Des dégâts survenus à cause de la manipulation mauvaise, l'installation incorrecte, mauvaise utilisation, négligence, des accidents, des fusibles sautés, fuite de la pile, du vol et du stockage incorrect
- Produits soumis à l'enlèvement ou la dégradation du numéro de série d'usine/étiquettes de code à barres ou des marquages.
- Des dégâts survenus à cause de la moisissure, l'humidité, des températures excessives, des conditions environnementales extrêmes ou des causes naturelles externes

**Veuillez revoir la section Soins et Entretien de votre Guide d'Opération, pour avoir des informations supplémentaires quant à la bonne utilisation de votre produit.**

## ***Limitations***

LA MESURE DE LA RESPONSABILITE DE LA SOCIETE SOUS CETTE GARANTIE EST LIMITEE A LA REPARATION OU REMPLACEMENT MENTIONNES CI-DESSUS ET DANS AUCUN CAS LA RESPONSABILITE DE LA SOCIETE N'EXCEDERA LE PRIX D'ACHAT PAYE PAR L'ACHETEUR POUR CE PRODUIT.

Cette garantie tient lieu de toute autre garantie ou responsabilité expresses. TOUTE GARANTIE IMPLIQUEE, Y COMPRIS UNE GARANTIE IMPLIQUEE DE MARCHANDABILITE, SERA LIMITEE A LA DUREE DE CETTE GARANTIE ECRITE. TOUTE ACTION POUR RUPTURE D'UNE GARANTIE QUELCONQUE SOUS LA PRESENTE, Y COMPRIS TOUTE GARANTIE IMPLIQUEE DE MARCHANDABILITE DOIT ÊTRE PORTEE DANS UNE PERIODE DE 24 MOIS DEPUIS LA DATE D'ACHAT D'ORIGINE. EN AUCUN CAS LA SOCIETE NE SERA RESPONSABLE POUR TOUT DOMMAGE INDIRECT OU ACCESSOIRE POUR RUPTURE DE CETTE GARANTIE OU TOUTE AUTRE GARANTIE, EXPRESSE OU IMPLIQUEE. Aucune personne ni un représentant n'est autorisée d'assumer de la part de la société une responsabilité autre que celle exprimée ici relatif à la vente de ce produit.

Certains états ne permettent pas de limitations sur la durée d'une garantie impliquée ou sur l'exclusion ou la limitation des dommages indirects et accessoires, tels que les informations ci-dessus ne s'appliquent pas à vous. Cette garantie vous donne des droits légaux spécifiques et vous pouvez aussi jouir d'autres droits qui varient d'état à l'état.

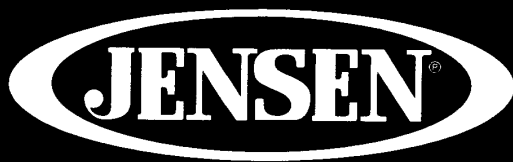
## ***Obtenir le service de garantie***

- Pour obtenir la réparation ou le remplacement dans les termes de cette garantie, appelez 1-800-323-4815 pour avoir l'emplacement d'une station de garantie qui dessert votre région.
- Si le produit est envoyé pour un service de garantie vous devez payer les frais de transportation de départ. La Société payera la transportation de retour pour tout produit sous garantie si le produit est retourné à une adresse située aux Etats-Unis, Puerto Rico ou Canada.
- Assurez-vous que le produit soit bien emballé pour éviter des accidents pendant la transportation. Nous recommandons un transporteur qui fournit un service de dépistage pour éviter la perte des paquets. Des paquets perdus ou endommagés ne sont pas couverts par cette garantie.
- Fournissez une description détaillée des problèmes que vous voulez faire résoudre par le service de garantie.

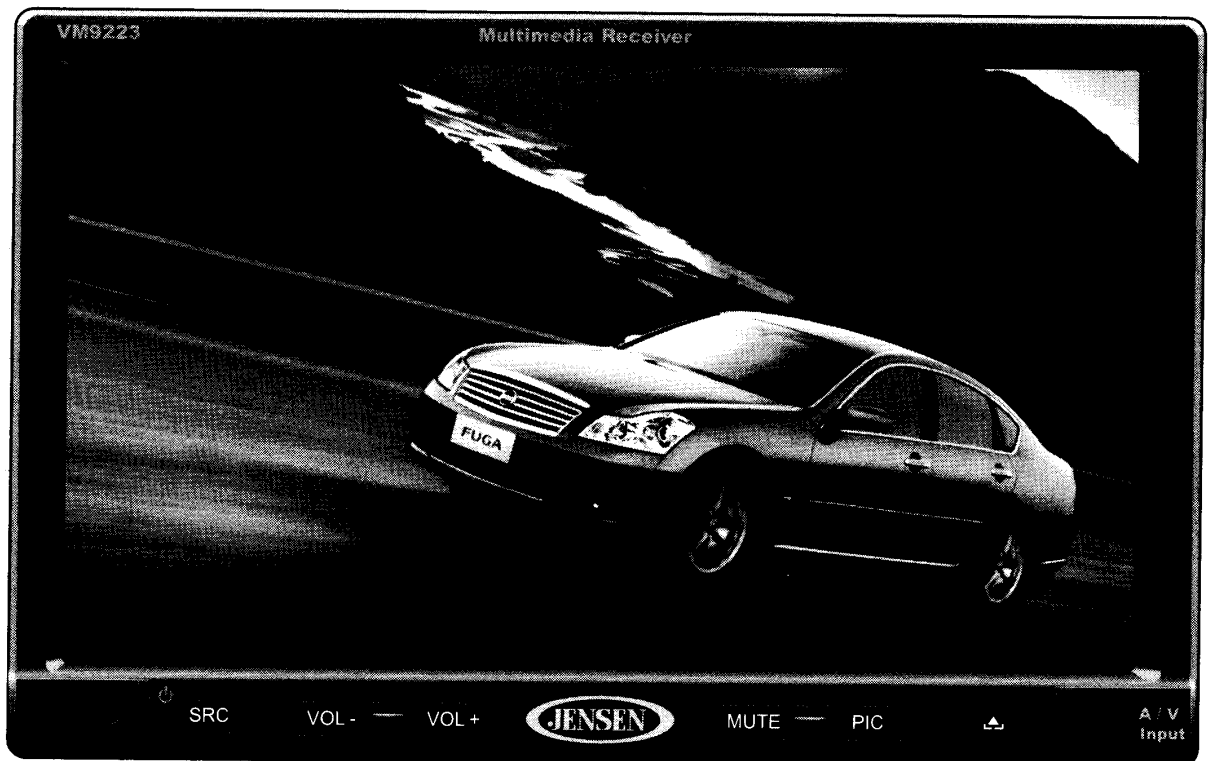


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## VM9223 Quick Reference Guide



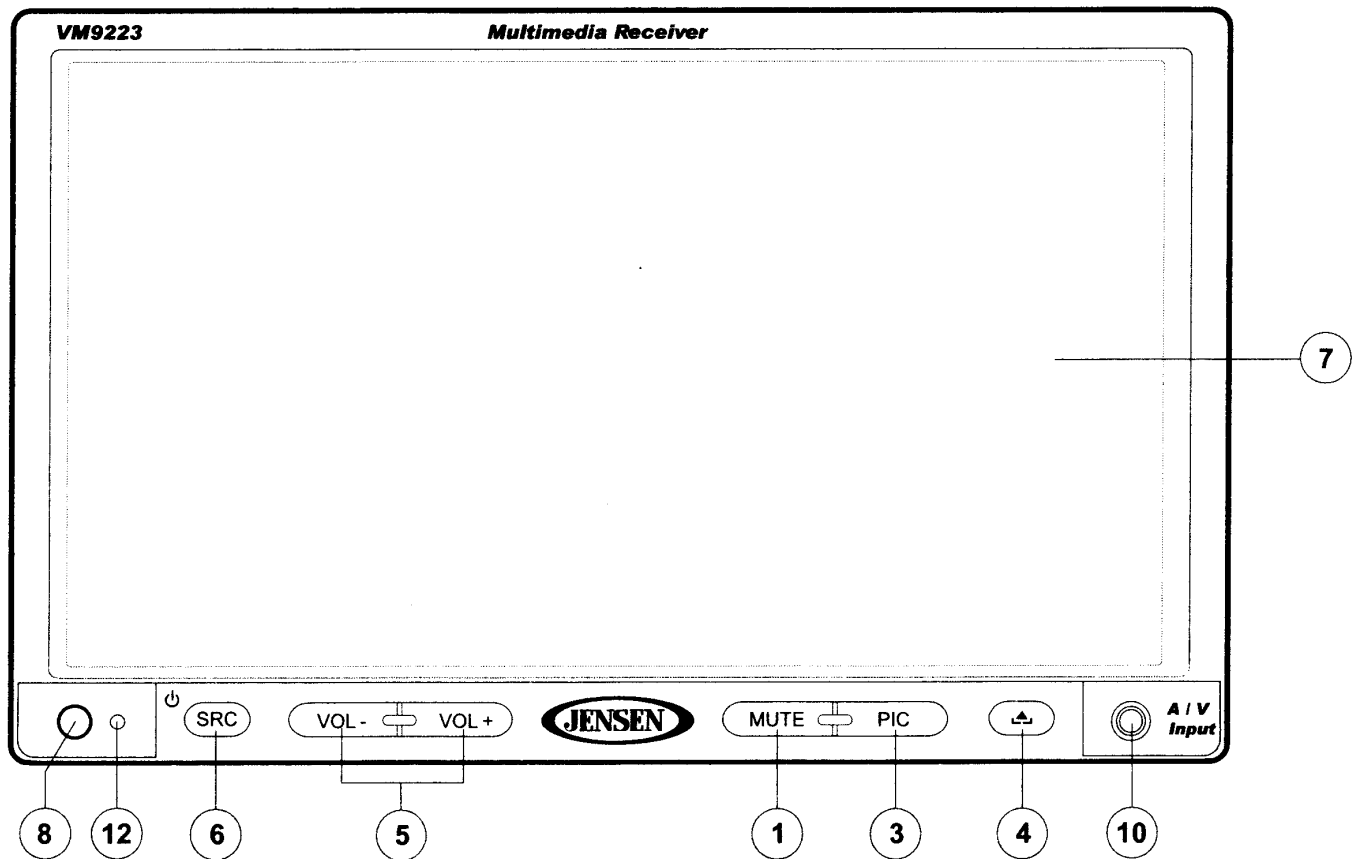
### Featuring:

DVD, CD, MP3, WMA, USB and  
SD Playback  
Touch Screen Interface  
RCA and Front Panel A/V Input  
USB Connector

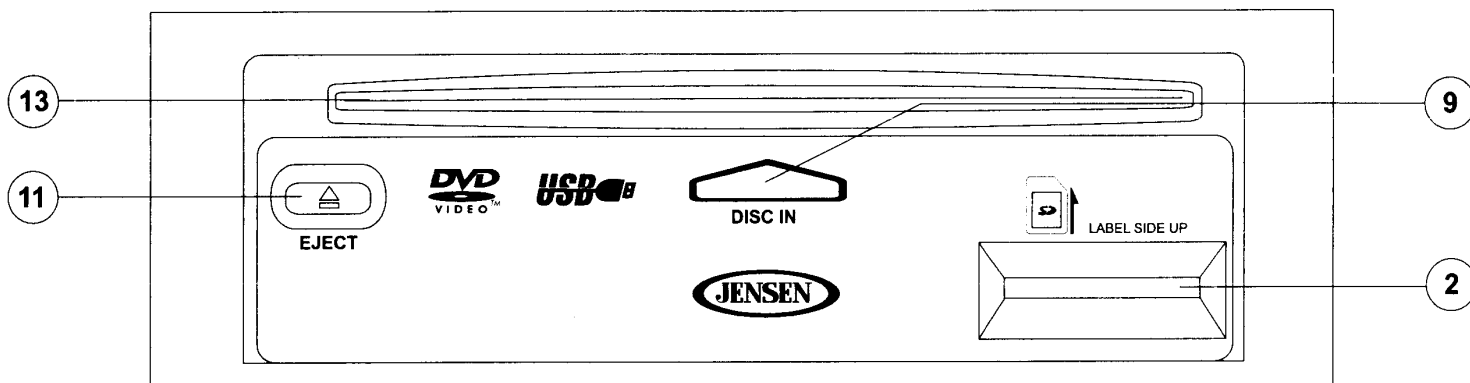
Composite Video Out  
Remote Control  
Navigation Ready (NAV102 Only)  
Bluetooth Ready (Requires  
BTM10)

- **Navigation operation requires NAV102 installation**
- **Bluetooth operation requires BTM10 installation**
- **Rear Camera operation requires rear camera installation**

# Controls and Indicators



1. Press to silence the audio. Press again to resume the previous volume level. In radio mode, press and hold to set the LOC/DX function. In all other modes, *press and hold* while the volume icon is showing to set the turn-on volume.
2. Insert SD card for playback of compatible multimedia files.
3. Press to adjust the Brightness and Contrast. Press the **PIC** button again to move between Brightness and Contrast. Press the **VOL-/VOL+** buttons to adjust the setting for the selected option.  
When the NAV102 is connected, *press and hold* to display the navigation user interface.



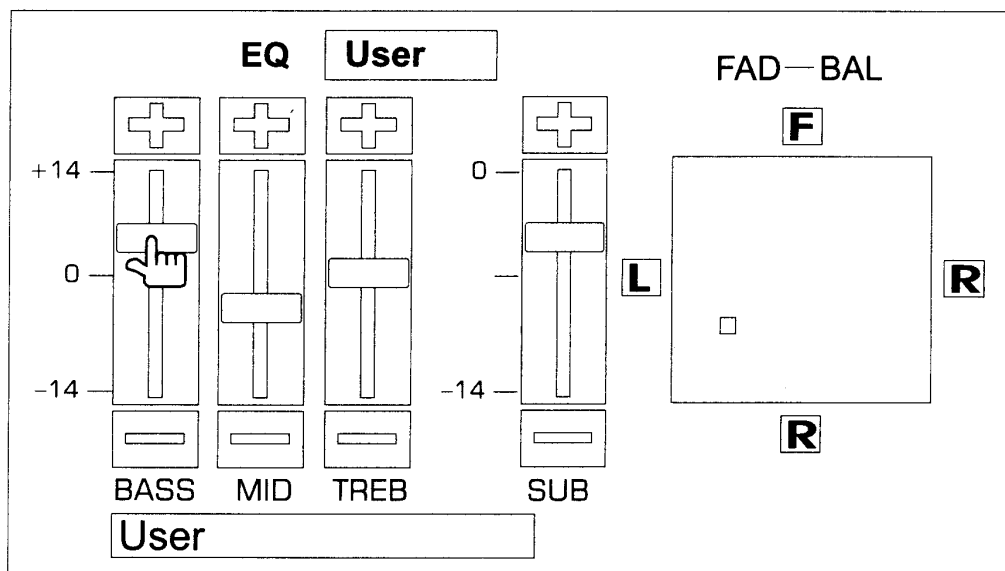
4. Press to activate the automatic mechanical system and slide the TFT monitor down to reveal the disc and SD slots. Press again to close the TFT.  
*Press and hold* to activate the tilt function. Use the **VOL -/VOL+** buttons to adjust the angle of the screen while the yellow tilt icon is flashing. You can also adjust the tilt using the  $\wedge$  and  $\vee$  buttons on the remote control. Press once to adjust the downward tilt angle of the screen one step at a time or *press and hold* to adjust the angle in a continuous motion.
5. Press **VOL -** to decrease the volume. Press **VOL+** to increase the volume.
6. Press the **SRC/⏻** button to turn the unit on. *Press and hold* to turn the unit off. Press to access the SOURCE MENU.
7. TFT Monitor
8. IR Remote Control Receiver
9. Disc Indicator Light
10. Audio/Video Input
11. Press to eject disc. *Press and hold* to reset core mechanism position.
12. Press to reset system settings to factory default (except the password and parental lock setting).
13. Disc Slot



# Common User Settings

## Audio Control Menu

Touch the **EQ** button on the left side of the screen to access the Audio Control Menu, shown below.



*The "FAD-BAL" portion of the screen uses a grid control. Touch inside the box to move the cursor and adjust the Fader and Balance level from Front to Rear and Left to Right.*

1. Use the touchscreen, or press the (>>|)/(|<<) buttons on the remote control to highlight the audio feature to be adjusted.
2. Touch the screen to select the highlighted option.
3. Touch the +/- buttons on the screen or press the |<<, >>|, >>, or << buttons on the remote control to adjust the selected feature to the desired setting.

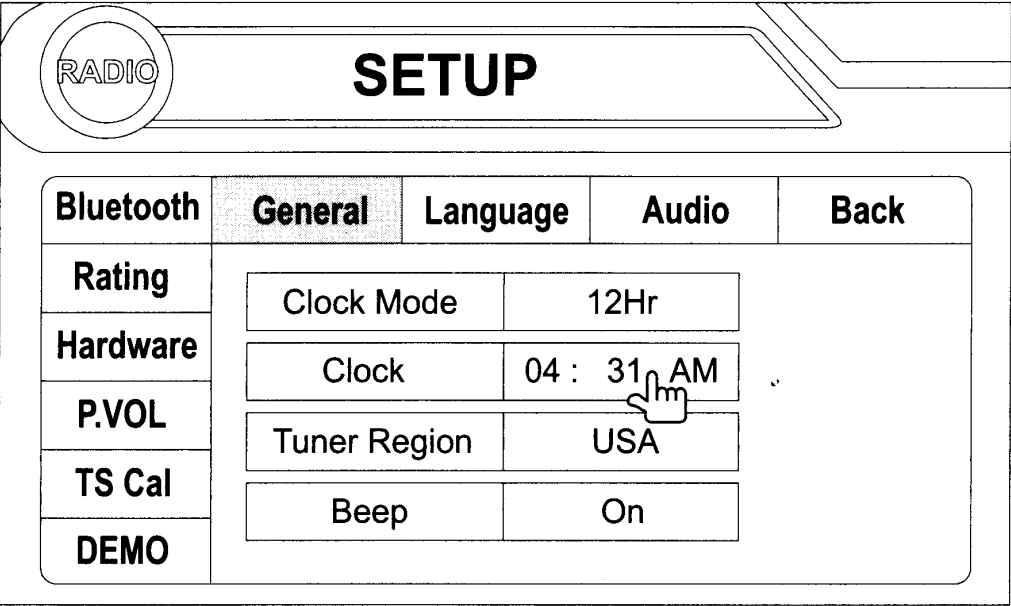
**NOTE**

The EQ mode will automatically change to "USER" when individual audio functions are adjusted.

# Set Clock

The clock appears in the top right corner of the screen and on the LCD screen during certain operations.

To set the clock, you must first press the  button on the screen to access the SETUP menu.

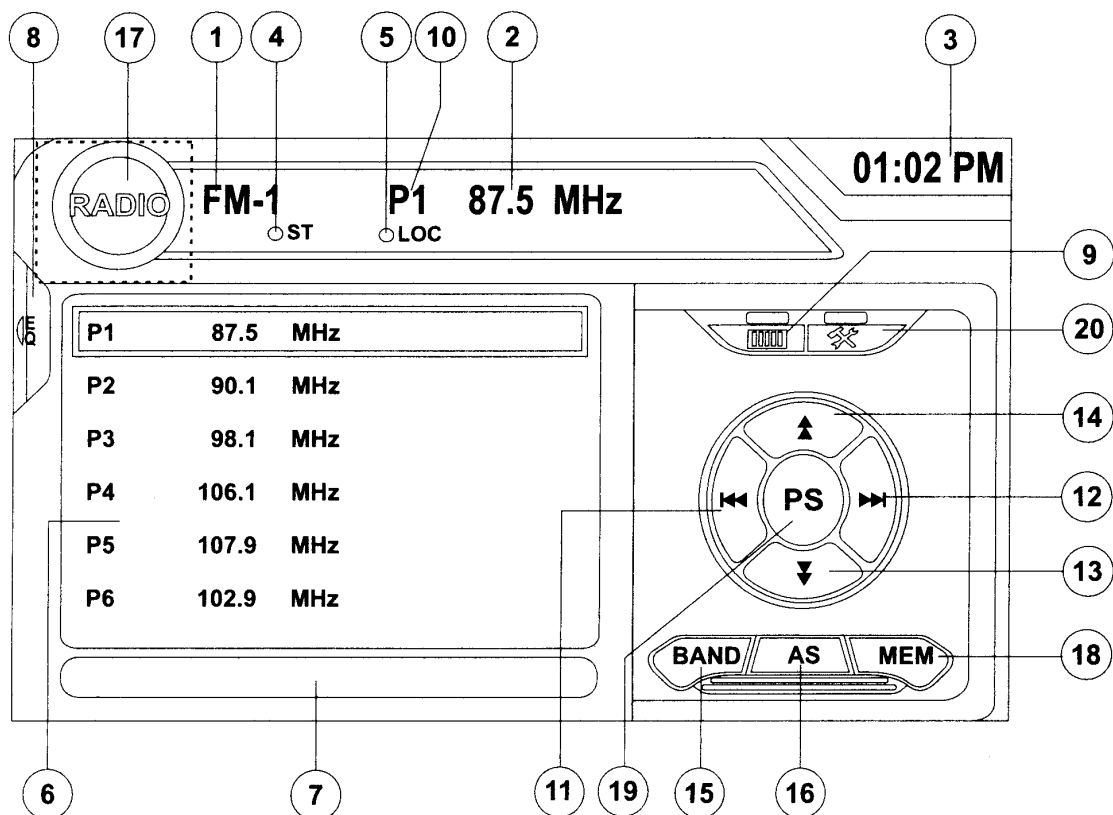



*Touch the menu titles across the left and top of the menu to see highlighted sub-menu options in the center of the screen.*

*Touch the menu option you want to adjust and use the touch screen to adjust the setting.*


1. Use the touch screen or directional buttons on the remote control to select the Clock option.
2. Use the touch screen or press the >/|| button on the remote control to enter the adjustment field.
3. Select a new value using the touch screen or >> and << buttons on the remote control. The AM/PM indication will change as you continue to adjust the hour past 12.
4. Use the touch screen or press >/|| to confirm and exit the SETUP menu.

# Tuner User Interface



1. Current radio band indicator
2. Radio frequency indicator
3. Clock display
4. Stereo reception indicator
5. Tuning mode indicator (local/distant)
6. Touch to recall preset stations.
7. No function in tuner mode.
8. Touch for quick access to Equalizer level settings.
9. Touch to access the Direct Entry Screen. Enter the desired frequency and then touch the  button. You can also press **GOTO** on the remote control to access the Direct Entry Screen.

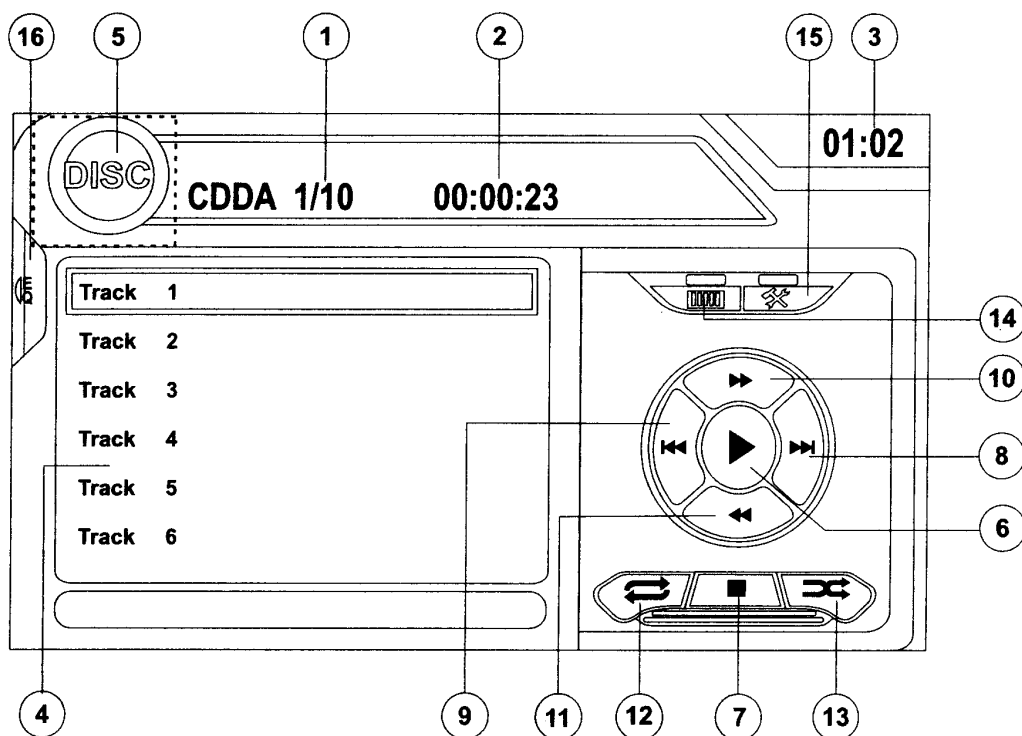
## Direct Entry Screen

|                   |       |   |   |
|-------------------|-------|---|---|
| FM: _ _ _ . _ MHz |       |   |   |
| 1                 | 2     | 3 | Exit  |
| 4                 | 5     | 6 |   |
| 7                 | 8     | 9 |  |
| 0                 | Clear |   |   |

10. Preset station indicator
11. |<<: Touch to seek backward.
12. >>|: Touch to seek forward.
13. <<: Touch to tune backward one step.
14. >>: Touch to tune forward one step.
15. **BAND**: Touch to change bands (FM1, FM2, FM3, AM1, and AM2).
16. **AS**: Touch to automatically store stations for the current band.
17. Touch to view the SOURCE MENU and select a new playback source. You can also change the source by pressing the **SRC** button on the control panel or remote control.
18. **MEM**: View screen used to enter current channel into preset memory. Touch **P1** - **P6** to store or **Exit** to leave the screen.
19. **PS** (Preview Scan): Touch to scan all stations available, stopping for 5 seconds at each and continuing until a station is selected.
20. View SETUP menu.

|           |    |    |
|-----------|----|----|
| Preset: _ |    |    |
| P1        | P2 | P3 |
| P4        | P5 | P6 |
| Exit      |    |    |

# CD/DVD Audio Operation



*The VM9223 will play music or other audio files from the following disc media:*

- CD-DA
- CD-R/RW
- DVD
- DVD+R/RW
- DVD-R/RW


*CD-R and CD-RW will not play unless the recording session is finalized.*

1. Current track and total number of tracks on disc
2. Elapsed playing time
3. Current time
4. Track titles (if available on disc)
5. Touch to view the SOURCE MENU and select a new playback source
6. ►/||: Touch to play/pause disc playback
7. ■: Touch to stop disc playback
8. >>|: Touch to move to next track
9. |<<: Touch to move to previous track
10. >>: Touch to fast forward current track
11. <<: Touch to rewind current track
12. Touch to activate/deactivate Repeat play mode

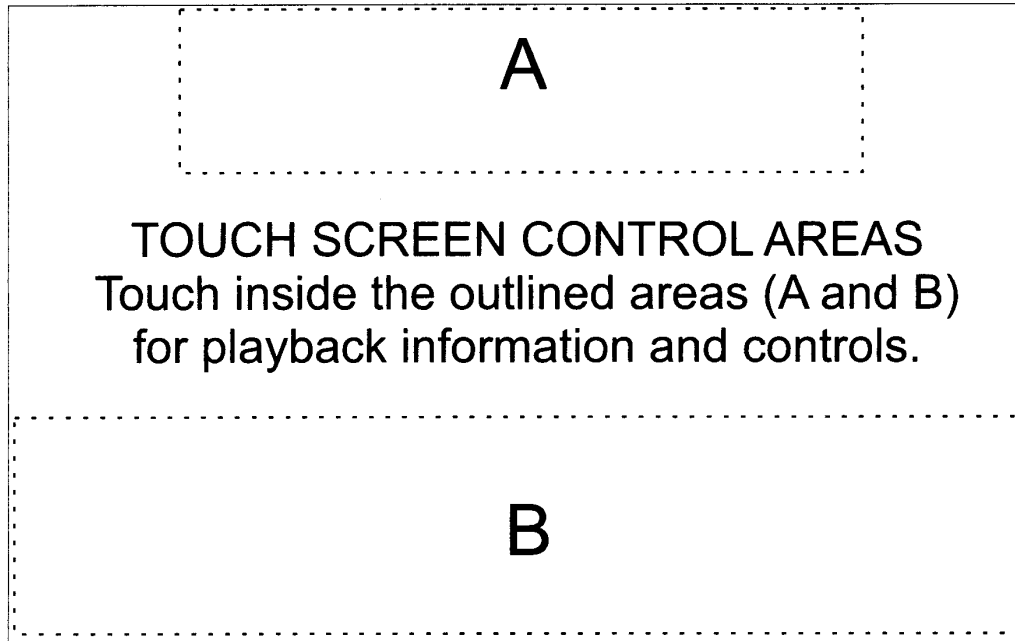
13. Touch to activate/deactivate Random mode

**NOTE**

**During disc play, press the INT button on the remote control to play the first 10 seconds of each track. When a desired track is reached, press the INT button again to play the selected track.**

14. Touch to access the direct entry screen
15. : Touch to view the SETUP menu
16. Touch for quick access to Equalizer level settings

## CD/DVD Video Operation



*A – Displays  
playback  
information*

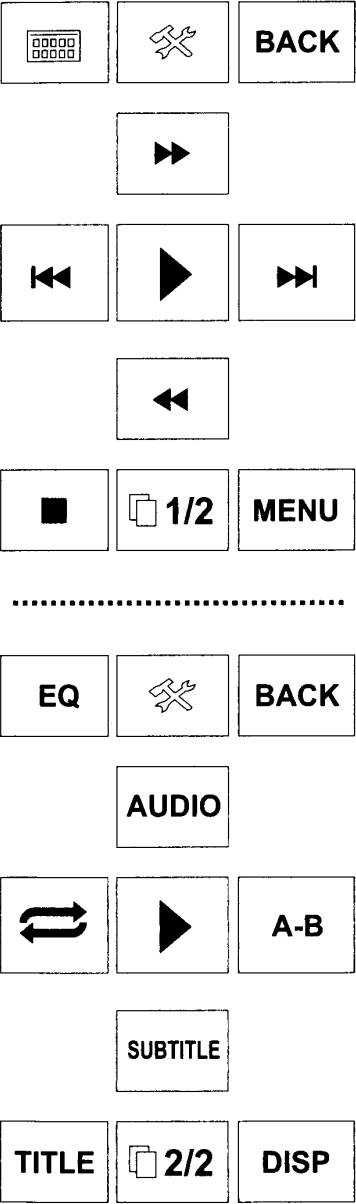
*B – Displays  
on-screen  
control menu*

**DVD Display Info →** DVD T : 5/8 C : 2/16 00:41:28 ... 2/6 Eng

**VCD Display Info →** VCD 2.0 T : 6/18 00:41:28

- T : 5/8 – “5/8” indicates the fifth of 8 titles on the DVD is currently playing.
- C : 2/16 – “2/16” indicates that the second of 16 chapters/tracks on the disc is currently playing.
- 00:41:28 – “00:41:28” indicates the playback time of the current title/track.
- ... 2/6 Eng – The language display information indicates the second language out of 6 (English) is currently being used.
- VCD 2.0 – Format of current disc.

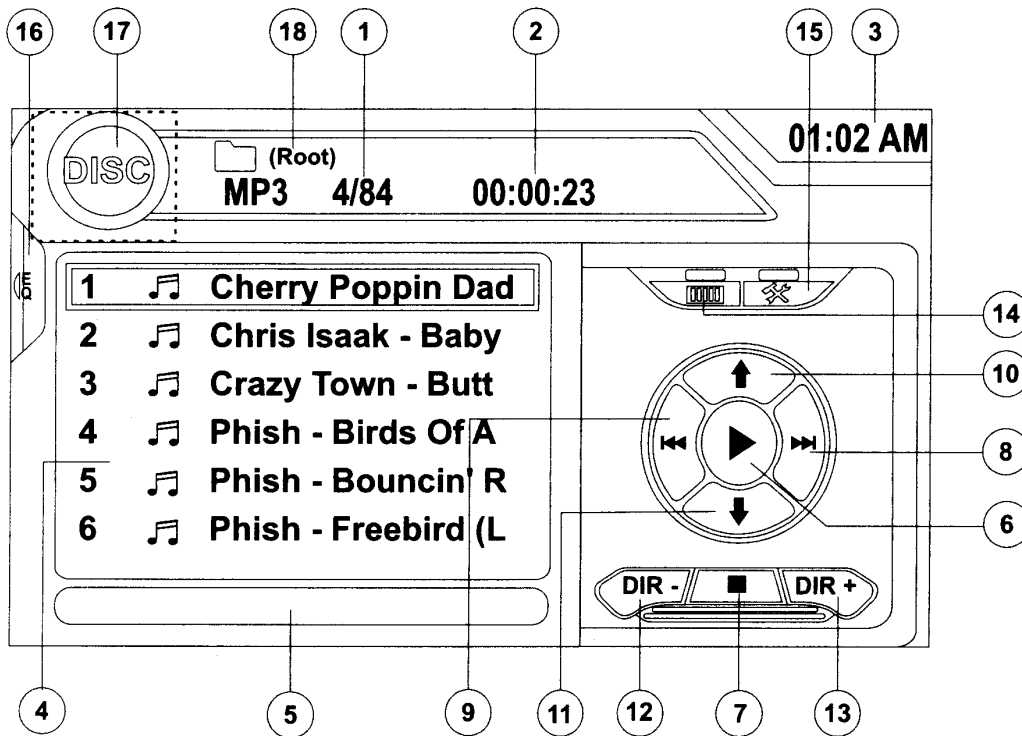
To access the on-screen controls, touch the bottom 1/3 of the screen (section B). Touch the 1/2 button to view a second page of controls.




|          |  |
|----------|--|
|          | Access the direct entry screen   |
|          | Access the SETUP menu  |
| BACK     | Exit on-screen control menu  |
|          | Rewind/Fast Forward  |
|          | Previous/Next track or title   |
|          | Play/Pause   |
|          | Stop playback  |
|          | View second page of on-screen controls   |
| MENU     | Access DVD Main Menu   |
| EQ       | Adjust Equalizer settings  |
| AUDIO    | Change audio language for disc playback  |
|          | Repeat play current track/chapter  |
| A-B      | Press to select beginning repeat point. Press again to select end repeat point. Press again to stop. |
| SUBTITLE | Select language for subtitles  |
| TITLE    | Select different title for playback  |
|          | View first page of on-screen controls  |
| DISP     | Display playback information   |



# MP3/WMA Operation

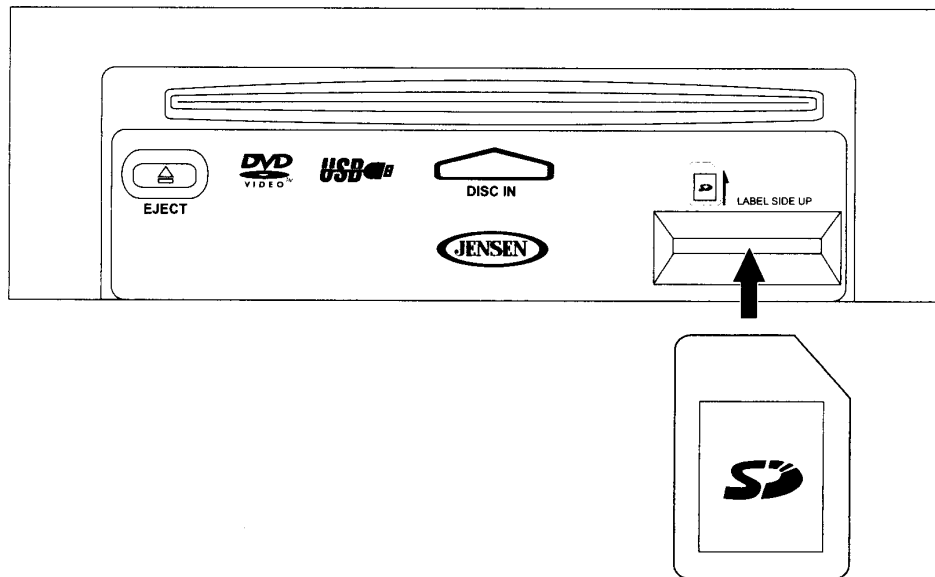


1. Current file and total number of files on your media device
2. Elapsed playing time
3. Current time
4. Track titles
5. ID3 information
6. ►/||: Touch to play/pause disc playback
7. ■: Touch to stop disc playback
8. >>|: Touch to move to next track
9. |<<: Touch to move to previous track
10. ↑: Touch to view the next page of songs
11. ↓: Touch to view the previous page of songs
12. **DIR -**: Touch to view the previous folder

13. **DIR +**: Touch to view the next folder
14. Touch to access the direct entry screen
15. : Touch to view the SETUP menu
16. Touch for quick access to Equalizer level settings
17. Touch to view the SOURCE MENU and select a new playback source
18. Folder name

### ***Inserting an SD Card***

To Insert an SD card, you must first press the **EJECT** button on the control panel or remote control to reveal the SD card slot. Insert the SD card into the card slot and the unit will read the media files on the card automatically.



To remove the card, first press the **SRC** button to switch to another mode and stop SD playback. Push in and release to pop the card out. Grasp the SD card and pull it straight out. Most cards have a thin recess that helps with removal.

# Bluetooth Operation

Bluetooth is a short-range wireless radio connectivity technology that is developed as a cable replacement for mobile phones, handheld PCs and other devices. Bluetooth operates in 2.4 GHz frequency range and transmits voice and data at speeds up to 1 megabit per second.

The BTM10 (purchased separately) is required for Bluetooth operation.

## ***Pairing your Phone***

1. Press the (ⓧ) button to initiate the pairing process. Keep the mobile phone within 2 meters of the head unit when pairing.
2. Select the Bluetooth setup option on the mobile phone to be paired (please refer to the phone's instruction manual).
3. If prompted, enter the "pass key" or pairing code. The default code for many phones is "0000". The default code for the VM9223 is "1234".
4. Select "VM9223" from the pairing list on the mobile phone.

## ***Hands Free Profile (HFP)***

To use a phone wirelessly with this unit, it is necessary to first establish a connection using Bluetooth wireless technology. Connection is normally established using HFP (Hands Free Profile), which gives you full control of functions available on the telephone source. However, depending on your phone, the connection may be made using HSP (Head Set Profile), making some functions unavailable. This is a limitation of your phone, not the VM9223.

**NOTE**

**The line-of-sight distance between this unit and your cellular phone must be 8 meters or less, depending on the environment.**

## ***Menu List***

The menu list appears on the left side of the screen and can be accessed from other modes by touching the MENU button on the right side of the screen.

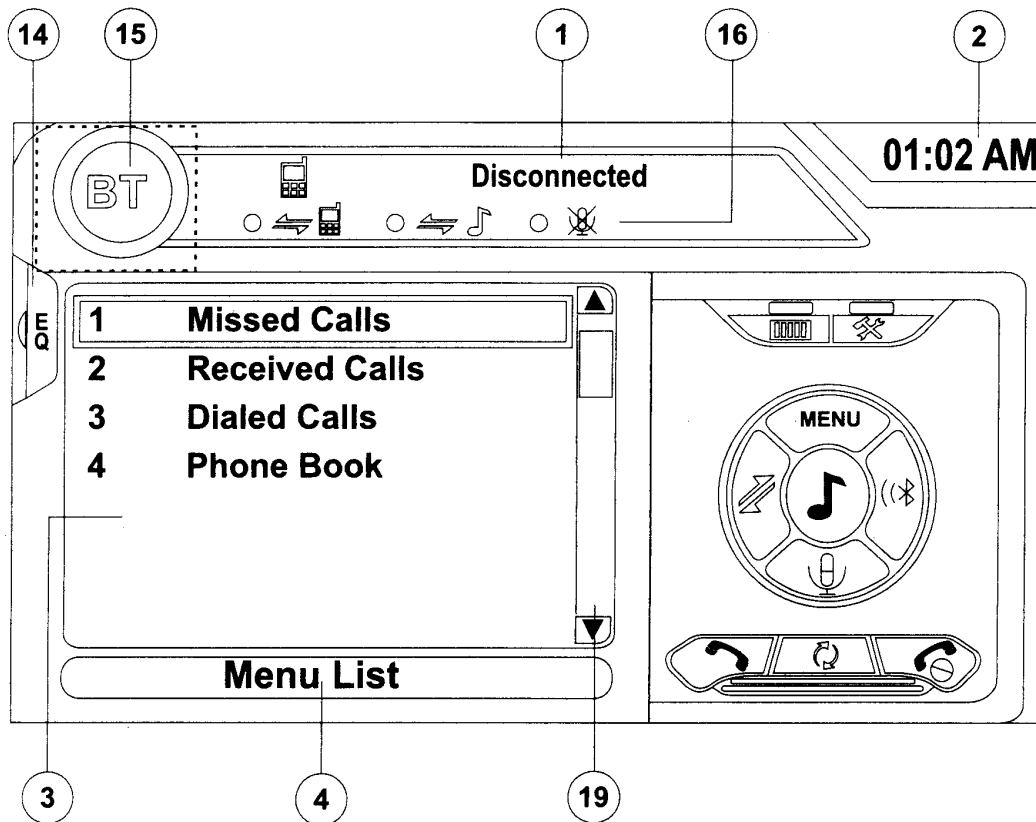
To make a call from a list, touch the number and then touch the ↩ button.

- **Missed Calls:** The Missed Calls list retrieves the list of Missed numbers from your phone. The last missed number is the first number on the list. Touch the Missed Calls menu option to view the list.
- **Dialed Calls:** The Dialed Calls list retrieves the list of dialed numbers from your phone. The last dialed number is the first number on the list. Touch the Dialed Calls menu option to view the list.
- **Received Calls:** Use the Received Calls list to view the last 10 received numbers stored on your phone. To access the Received list, touch the Received Calls menu option. The last received number is the first number on the list.
- **Phone Book:** Touch the Phone Book menu option to display the phone book stored on your mobile phone, if compatible. The screen will display “Ready...” while the phone book is downloading. Once the download is completed, you can use the arrow buttons and scroll bar on the right side of the window to navigate the list. Since the unit downloads one page of entries at a time, there may be a slight delay while the next page of numbers is downloaded.

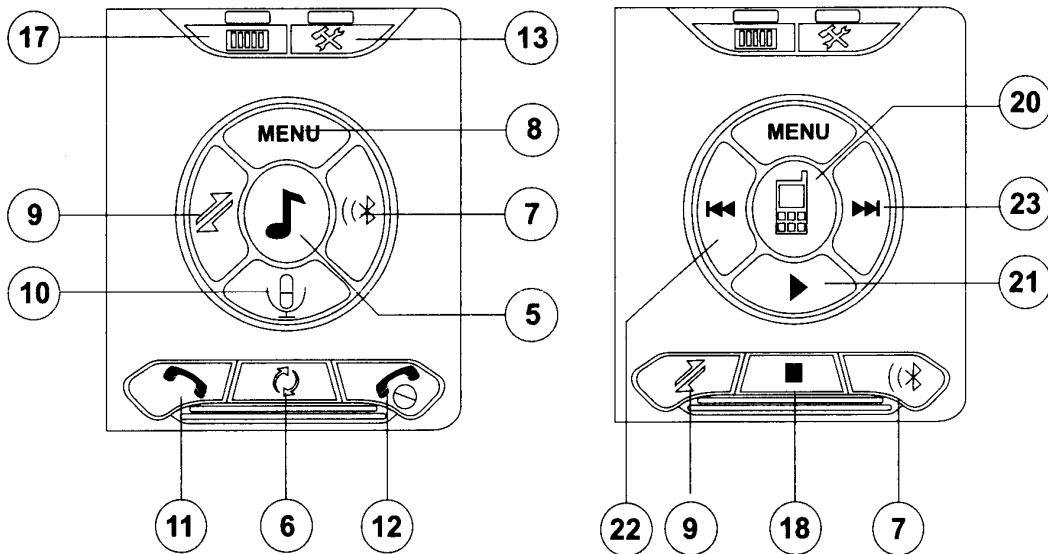
### **NOTE**

**Not all phones allow access to missed, received or dialed calls and some will not allow uploading of your phone's address book.**

## Bluetooth Operation (continued)



1. Current connection status/device connected
2. Current time
3. Bluetooth menu
4. Current operation status
5. Toggle Music/Phone menu
6. Transfer active call back to handset
7. Pair your Bluetooth phone (first time use)
8. Exit call listing display
9. Connect/disconnect Bluetooth device (phone, PDA, personal music player, etc.) with hands-free function



*Touch the music/phone icon in the middle of the circle to switch between phone interface (left) and music interface (right).*

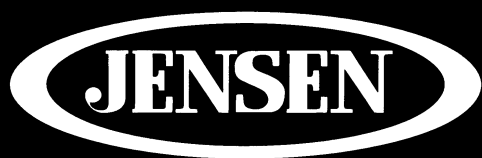
- 10. Mute/un-mute microphone during active call
- 11. Answer incoming call/make call
- 12. Reject incoming call/end call/quit pairing process/quit reading phone book or call listing
- 13. Touch to view the SETUP menu
- 14. Touch to view the equalizer
- 15. Touch to view the SOURCE MENU and select a new playback source
- 16. Status indicators (phone mode, music mode, mic mute)
- 17. Touch to access the direct entry screen
- 18. ■: Touch to stop A2DP playback
- 19. Touch the scroll bar and arrows to view the previous/ next page of choices (only visible when needed)
- 20. Toggle Music/Phone menu/mode
- 21. Play/Pause selected file
- 22. |<<: Touch to move to the previous file
- 23. >>|: Touch to move to the next file



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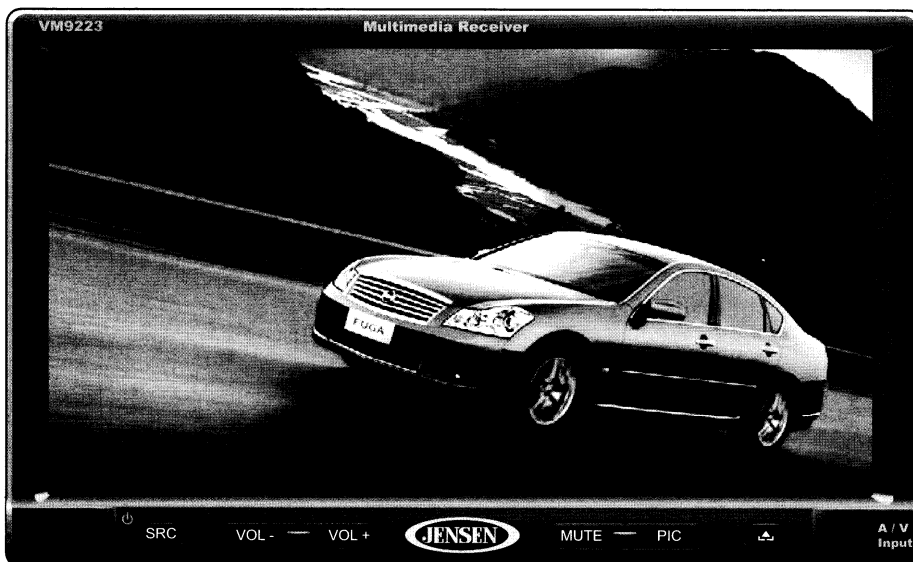
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Para obtener instrucciones en Español, diríjase a la página 5.

Pour des instructions en Français, référez-vous à la page 9.

# VM9223



## What's in the Box

VM9223 Head Unit  
Two Cosmetic Trim Rings  
Wiring Harness Power/Speaker  
Mounting Hardware  
Double DIN Sleeve  
Parking Brake Sensor  
Extension Wire

Remote Control  
3.5mm Media Cable  
2.5mm to RCA A/V Media Adapter Cable  
2.5mm to 3.5mm A/V Input Cable  
Owners Manual  
Quick Reference Guide  
Installation Guide

## Tools and Supplies

You will need these tools and supplies to install your VM9223:

- Torx type, flat-head and Philips screwdrivers
- Wire cutters and strippers
- Tools to remove existing radio (screwdriver, socket wrench set or other tools)
- Electrical tape
- Crimping tool
- Volt meter/test light
- Crimp connections
- 18 gauge wire for power connections
- 16 – 18 gauge speaker wire

**WARNING! Never install this unit where operation and viewing could interfere with safe driving conditions.**



## Optional Equipment

- **NAV102:** Allows you to access navigation features. All installation and operating instructions are included with the navigation module.
- **BTM10:** Allows you to connect to a Bluetooth enabled cell phone or other device.
- **Rear Camera**

## Disconnecting the Battery

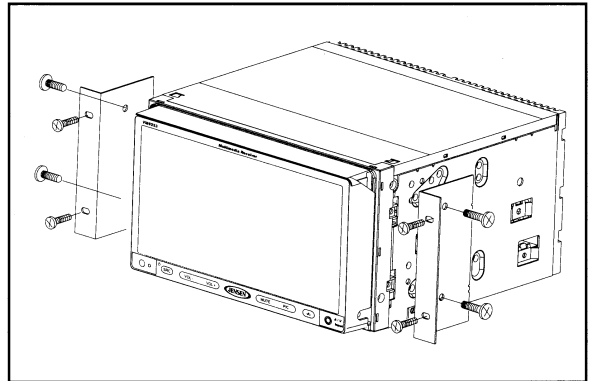
To prevent a short circuit, be sure to turn off the ignition and remove the negative (-) battery cable prior to installation.

*NOTE: If the VM9223 is to be installed in a car equipped with an on-board drive or navigation computer, do not disconnect the battery cable. If the cable is disconnected, the computer memory may be lost. Under these conditions, use extra caution during installation to avoid causing a short circuit.*

## ISO-DIN Installation

This unit is designed to fit into a 2.0 DIN dashboard opening, found in many imported cars. The unit has threaded holes in the chassis side panels which may be used with the original factory mounting brackets of some Toyota, Nissan, Mitsubishi, Isuzu, Hyundai and Honda vehicles to mount the radio to the dashboard. Please consult with your local car stereo specialty shop for assistance on this type of installation.

- 1** Remove the existing factory radio from the dashboard or center console mounting. Save all hardware and brackets as they will be used to mount the new radio.
- 2** Remove the factory mounting brackets and hardware from the existing radio and attach them to the new radio.  
*CAUTION: Do not exceed M5 X 6MM screw size. Longer screws may damage components inside the chassis.*
- 3** Place the radio in front of the dashboard opening so the wiring can be brought through the mounting sleeve. Follow the wiring diagram carefully and make certain all connections are secure and insulated with wire nuts or electrical tape. After completing the wiring connections, plug the ISO connectors into the mating sockets on the rear of the chassis. Turn the unit on to confirm operation (vehicle ignition switch must be "on"). If the unit does not operate, re-check all wiring until the problem is corrected.
- 4** Mount the new radio assembly to the dashboard or center console using the reverse procedure in step 1.



*CAUTION! Be careful not to damage the car wiring.*

*NOTE: It is the end-users responsibility to install and operate this unit in a manner in accordance with local, state and federal laws. The PARKING BRAKE wire MUST BE CONNECTED as directed in the manual.*

*CAUTION: Do not block the cooling fan exit. If blocked, the unit may overheat and become damaged.*

## Installation Using Half-Sleeve

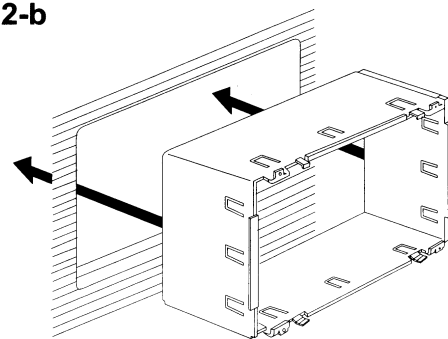
- 1** Remove the four screws at the front of the radio that attach the mounting sleeve to the radio chassis (two at the top and two at the bottom). Remove the mounting sleeve.
- 2** Install half-sleeve in the dashboard.
  - a. Install adapter if necessary (optional).
  - b. Install half-sleeve into adapter or dashboard (use only the supplied screws). Do not force the sleeve into the opening or cause it to bend or bow.  
*CAUTION! Be careful not to damage the car wiring.*
  - c. Locate the series of bend-tabs along the top, bottom and sides of the mounting sleeve. With the sleeve fully inserted into the dashboard opening, bend as many of the tabs outward as necessary so that the sleeve is firmly secured to the dashboard.
- 3** Place the radio in front of the dashboard opening so the wiring can be brought through the mounting sleeve.
- 4** Complete wiring as illustrated in the wiring diagram. Once the wiring is complete, reconnect the battery negative terminal. If there is no ACC available, connect the ACC lead to the power supply with a switch.  
*WARNING! Only connect the unit to a 12-volt power supply with proper grounding.*
- 5** After completing the wiring connections, turn the unit on to confirm operation (ignition switch must be on). If unit does not operate, recheck all wiring until problem is corrected. Once proper operation is achieved, turn off the ignition switch and proceed with final mounting of the chassis.
  - a. Connect wiring adapter to existing wiring harness.
  - b. Connect antenna lead.
  - c. Carefully slide the radio into the half-sleeve, making sure it is right-side-up. Use the supplied screws to attach the radio to the half sleeve.

## Using the Cosmetic Trim Ring

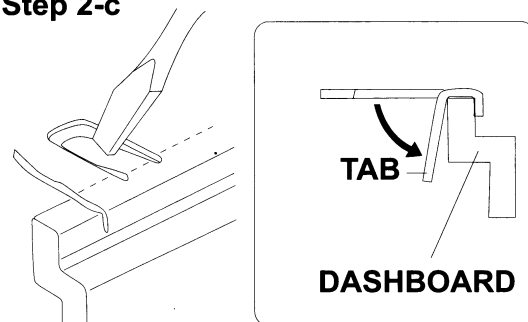
Two cosmetic trim rings are packaged with the head unit for installation flexibility. This unit will fit into most import dashes with little or no modification to the dash board/cavity. Some US domestic vehicle dashes will accept a Double-DIN chassis, but there is usually a small gap between the radio and dash piece after installation is complete. In this case, use the appropriate trim ring to conceal any gaps that may be present.

*NOTE: For proper operation of the CD/DVD player, the chassis must be mounted within 30° of horizontal. Make sure the unit is mounted within this limitation.*

**Step 2-b**

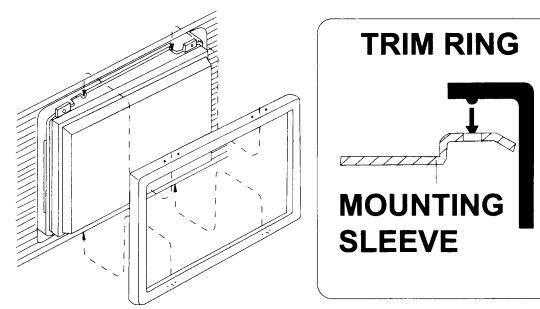
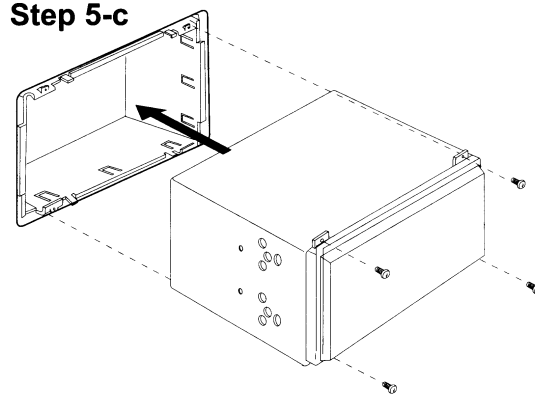


**Step 2-c**



*NOTE: When replacing a fuse, be sure to use correct type and amperage to avoid damaging the radio. The VM9223 uses one 10 amp fuse, located in the black filter box in-line with the main wire harness as well as a 15 amp ATC fuse located next to the wiring harness connector.*

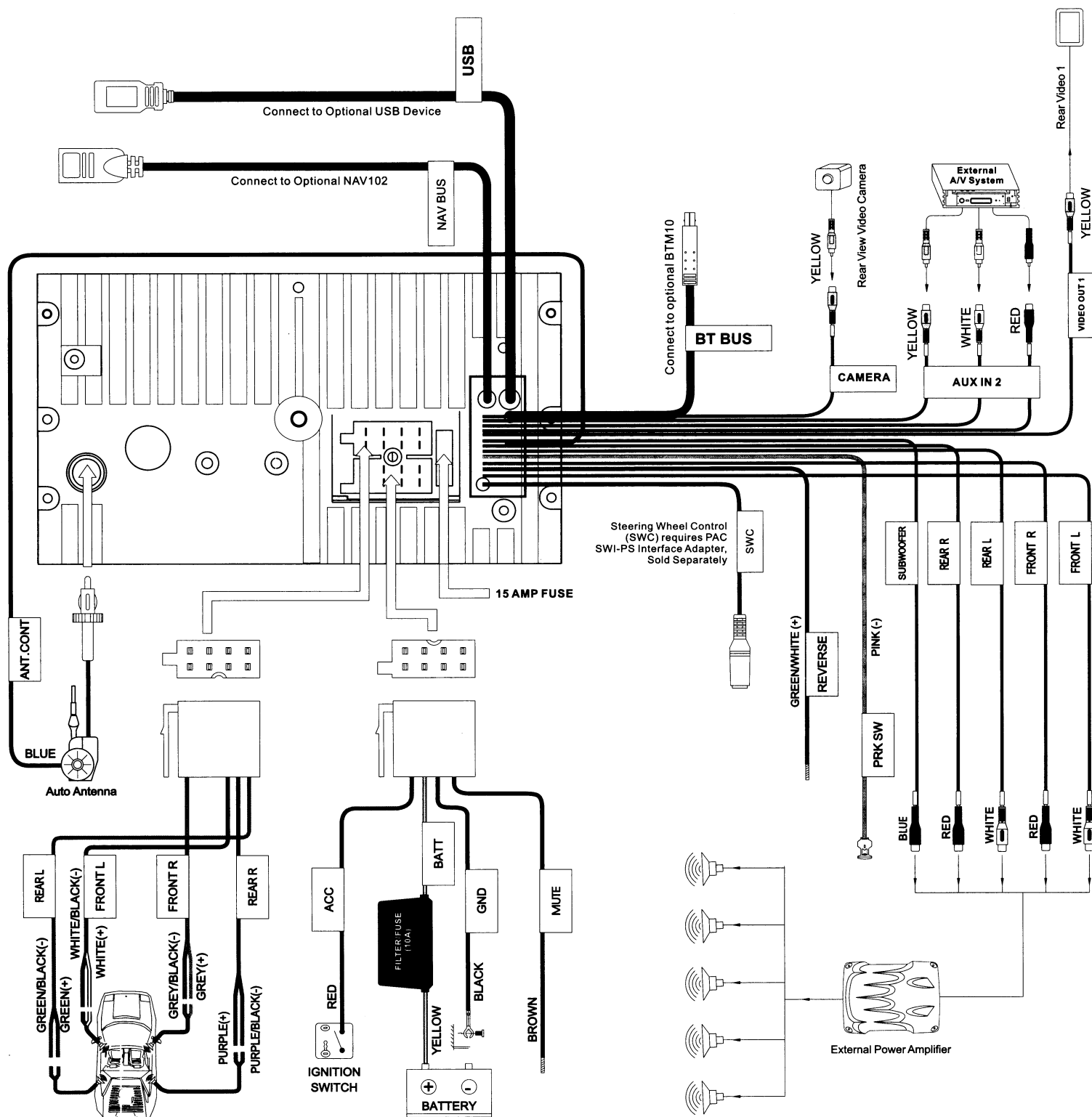
**Step 5-c**



# Wiring Diagram

**IMPORTANT:** Incorrect wiring connections can damage the unit. Follow the wiring instructions carefully, or have the installation handled by an experienced technician.

**Need Help?** For technical assistance, call the Jensen customer support line at 1-800-323-4815.





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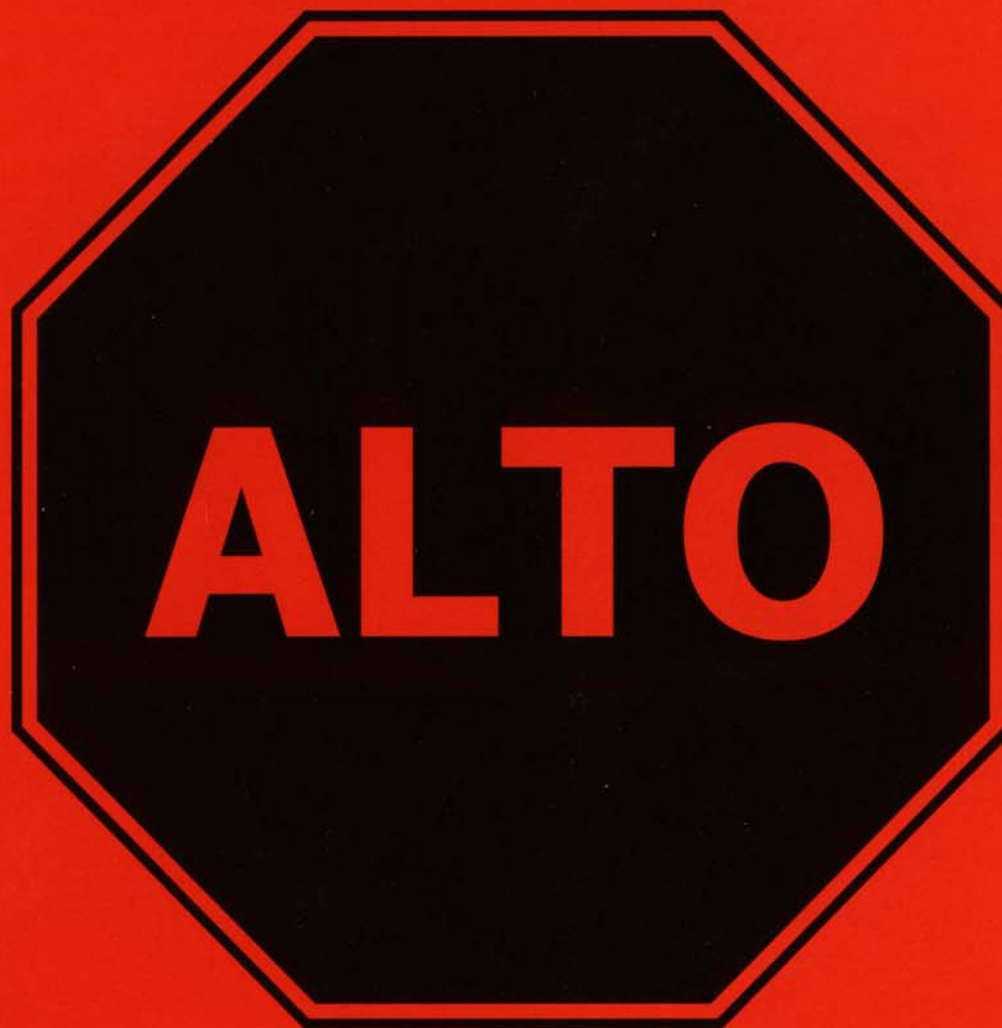
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